The Journal
OF THE KANSAS MEDICAL SOCIETY

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FEBRUARY, 1951 Vol. LII, No. 2

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Bibliography

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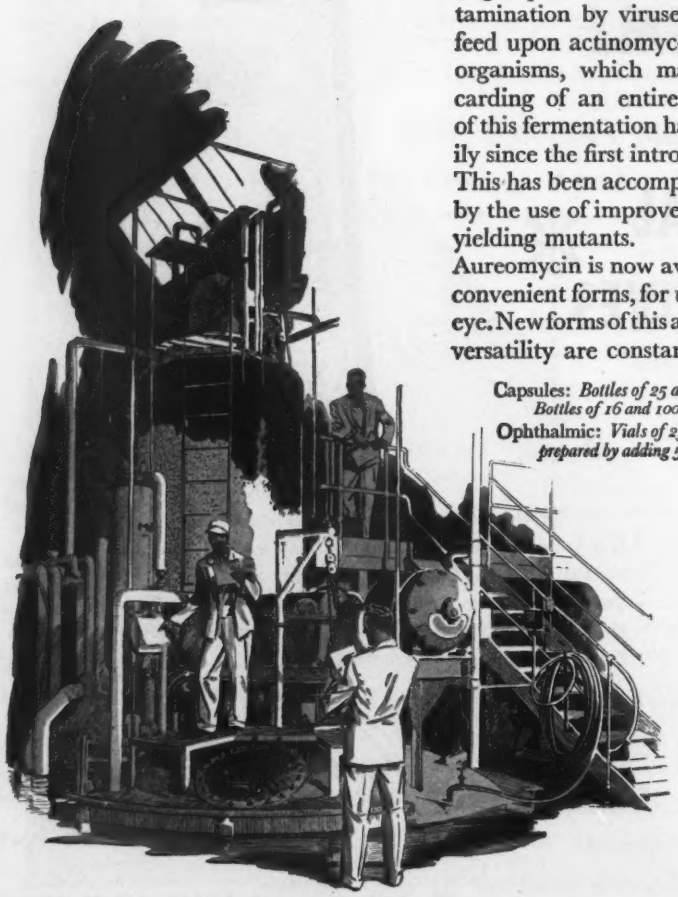

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(1) Mosenthal, H. O.: Management of Diabetes Mellitus: An Analysis of Present-Day Methods of Treatment, Ann. Int. Med., 29:79 (July) 1948.

(2) McLester, J. S.: Nutrition and Diet in Health and Disease, 5th ed., Phil., W. B. Saunders Company, 1949, page 364.

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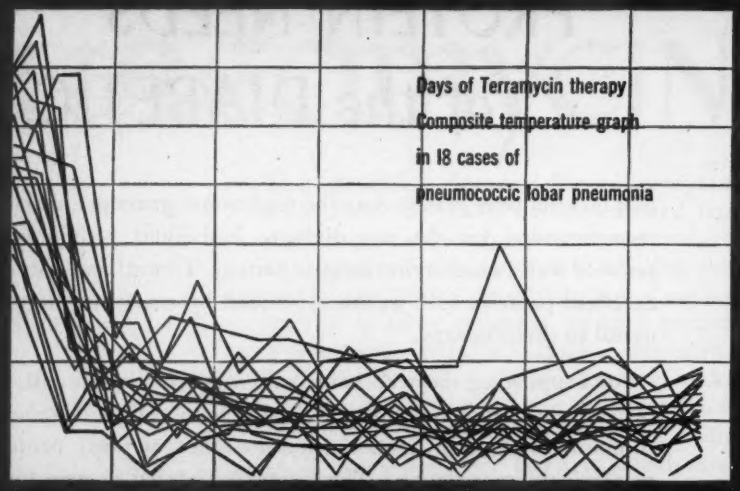

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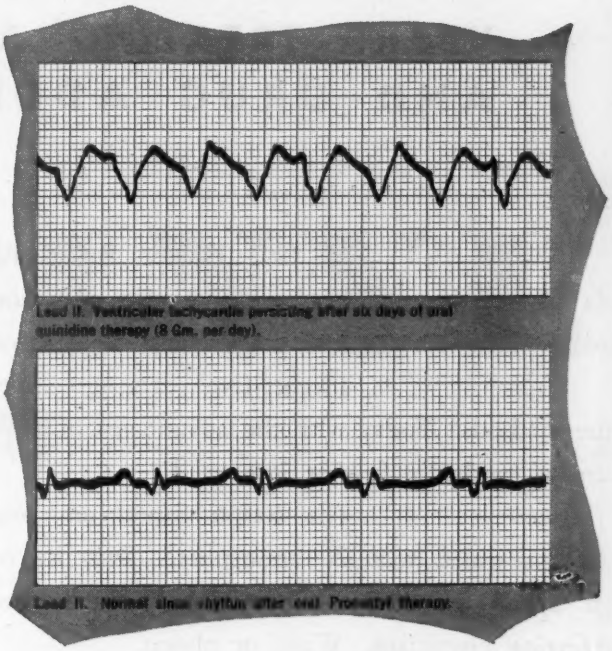

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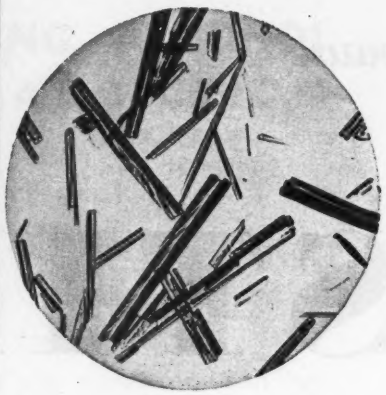

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Volume LII FEBRUARY, 1951 No. 2

The Problem of Success and Failure in the School Age Child

Rodger A. Moon, M.D.*
Emporia, Kansas

Clara Lambert, in a pamphlet distributed by the Kansas State Health Department entitled "Understand Your Child—from 6 to 12,"[1] speaks of the school years from nursery to adolescence as "the forgotten years of childhood." After a search of the literature for material for this paper, I am inclined to agree with her. Much has been written about the pre-school child and about the adolescent, but articles dealing with the school age child are few and far between.

In some respects this situation is understandable. The first five years of a child's life are of great importance in determining personality traits which the child will carry throughout his or her life. It has been truly said that a child's behavior at school reflects the home environment. More fundamental, however, than behavior characteristics are the child's mental attitudes toward school mates, toward teachers, and toward himself. If the first five years of life have been characterized by parental harmony, love, and understanding, if the child feels secure in his place in the family, and secure in the place of the family in the community, then he should have a minimal amount of difficulty in making the many adjustments which must be made when he leaves the small, protective circle of the family for the wider experiences of school life.

The adolescent period receives considerable attention because it is at this time that the effects of the pre-school and early school experiences usually become manifest in either "normal" or "delinquent" behavior. At this period, too, there are important adjustments—adjustment from the child's world to the adult's world, adjustment to awakening instinctive sexual drives; and adjustment to the physical changes which are taking place.

General Consideration of the School Age Child

Let us return to the school age child and his emotional problems, for the child of this age-group does, as already indicated, have a number of problems. The child of this age goes off to school not quite as care-free as one would think from observing him as he goes skipping along. He is concerned about this change that has come into his life, for he dislikes nothing more than to have the things he has become used to disrupted. He likes the same story time after time. He dislikes to move to a new home, even though it is nicer than the old one, and he dislikes to be removed from his own familiar group of playmates. He worries about the baby brother left at home without "big brother" to look after him. He feels uncertainty regarding the matter of death, about which he has recently become concerned, and he is confused regarding matters pertaining to sex.

The Problem of Success and Failure

It is with none of these problems, however, that I wish to deal in this paper; it seems to me that there is one problem of the school age child today that out-weighs all others in importance. This is the problem of success and failure.

Why is the problem of success and failure of such importance? Dr. Iago Gladstone, in an article in *Mental Hygiene*[2] on the subject of delinquency, states that a human infant brings into life three mental characteristics: "(1) a strong instinctual drive; (2) the potentialities for loving; and (3) a large capacity for learning by experience." The instincts are given the infant fully developed, but the capacity to love and live in harmony with his fellows must be realized in experience; i.e., the infant, and later the child, must experience love in order that he, himself, may love. Therefore, if the experience is lacking, or is of such a nature as to inhibit the capacity to love, the child's personality becomes retarded and arrested in its development toward individual and social effectiveness. Such a child develops a personality charged with the conviction that every man's hand is against him, and his against every man. Herein lies the importance of the problem of success and failure.

*Assistant in Pediatrics, University of Kansas Medical Center, Kansas City, Kansas.

Incidence of Maladjustment in Children

In a study made recently of our schools in Kansas 695 emotionally maladjusted children were discovered, and it was estimated that there are an additional 11,240 of these children out of a population of 400,000. Every year approximately 2000 cases of juvenile delinquency appear before either the juvenile or the probate courts in Kansas.[3] A great number of these cases are either traceable to failure in school, or have been aggravated by failure in school.

The Effect of Failure upon the Child

R. W. Tyler, chairman of the Department of Education at the University of Chicago, in an article entitled "Cooperation and Conflict in the Mental Development of the Child,"[4] makes this statement: "Practical school experience and psychological studies have both indicated negative, often devastating effects of failure. Children have lost confidence, have ceased to be interested in school work, have even hated educational activities, and, in many cases, have developed patterns of anti-social behavior, as reactions to school failure." Studies of the personalities and intelligence of the inmates of our penal institutions have shown that by and large these people are of below average intelligence, and a careful examination of their history often shows that their trouble began with persistent failure in school with its inevitable penalty, the loss of the esteem and respect of society. The equally inevitable reaction of hostility toward society which followed resulted in their unfortunate careers. How worthwhile it would be, then, if we could somehow change this chain reaction of failure, loss of love and respect, and hostility!

It seems pertinent at this point to inquire, "Why does failure in school have such a serious effect on our children? Who or what is to blame?"

The answer to this question is that we are all to blame: physicians, teachers, fathers and mothers, and others who come in contact with children.

Fathers and mothers are to blame when, as parents of a pre-school child, they attempt to press that child into a mold of their own design—usually in the image of themselves as they imagine themselves to be, or as they wish they could be. They begin dreaming dreams and making plans for Junior the moment he arrives on the scene. He will be a star athlete and graduate from high school, if not as valedictorian, then certainly on the honor roll. He will, of course, go to college, and they may even enroll him, at the tender age of six weeks, in the class of 1967 of their particular alma mater!

Fathers and mothers are to blame when, as parents of the school-age child, they berate, scold, or even punish that child for failing to pass to the next grade, for bringing home only fair marks on the report card, or even for failing to get superior grades in all studies—although they do not expect adults to be equally talented in all kinds of endeavor.

Fathers and mothers are to blame when, by their attitudes and remarks, they indicate to their children that to fail is shameful and disgraceful, and thereby give their tacit approval to the ridicule of other children who, because of lower intelligence, fail in the regular classes and must attend the "opportunity room."

Parents are to blame when they fail to realize or accept the fact that failure in school may be due to visual or hearing defects, fatigue or chronic illness; that a child may have difficulty because he is of high intelligence and is bored because the work is too easy; that nervousness, worry, and insecurity in the home are also causes of failure; and that the cause of a child's failure is probably not laziness.

We, as physicians, are also at fault if we fail to inform the public in these matters, whether by means of appropriate counsel to parents who come to us for help, or by talks before lay audiences. Furthermore, we may be at fault if we resort to "snap judgment" and categorize a child as mentally deficient without first having carefully investigated the case from a social and psychiatric point of view.

Teachers are to blame when they fail to capitalize on special aptitudes of their slower pupils in order that their interest and self-respect may be maintained.

Lastly, we need to take into account the highly competitive nature of the world in which we live, where success is too often measured by the wealth accumulated rather than by the amount and quality of service which has been rendered.

Case Studies

The following case studies have been chosen to illustrate a few of the problems I have been discussing:

1. This is the case of Jim[5]—a boy of 14, who, at the end of his 10th week in high school was failing in three major subjects. His past record showed him to be of average intelligence, and he had had no previous serious difficulty with his studies. His outstanding ability was art. Inquiry into the family situation revealed that the father had had a nervous breakdown from which he had not completely recovered. The father had not finished high school himself, having had to "come up the hard way." His attitude was that his son was having an easy life with nothing to do but study, and should make all "E's" and "S's." The father had high hopes that his son would be able to go to college and become a doctor. Jim's interest in art, a quality he apparently acquired from his mother, was regarded by the father as being silly, and Jim was not permitted to take any art courses. The

mother reported that the father raved when he saw the report card and called his son "stupid" and "dumbbell." He blamed the mother for the boy's poor showing.

The thing that brought the mother to the dean's office was that Jim wanted to quit school. After several interviews with Jim, permission was obtained from the mother for Jim to join the poster club. He was also appointed to help the science teacher in making wall charts and graphs. His math course was dropped and he was given special help for a short time in his other courses. Jim's subsequent progress was eminently satisfactory. Miss Kathleen Bardner, who reported this case from a high school dean's office, stated, "He had won recognition and honor from his teachers and classmates. But what was important he had found a deep personal satisfaction in his school work."

Jim's difficulty was a conflict involving his desire to please his father, his inability to excel the abler pupils, and his own interest and aptitude in art. He became confused and frustrated, and felt unloved and looked down upon by his family and classmates. His energies were thus taken up by his emotional problem to the extent that he failed completely and sought escape from his problem by quitting school.

2. Another case[6] which illustrates some of the complexities which may be responsible for a child's failure in school is that of a seven-year-old boy, Tommy. Tommy was brought to a child guidance clinic by his mother because he was doing very poorly in the second grade, and was acting much of the time as though he were afraid. Tommy had had a psychological examination which revealed him to be of normal intelligence. The mother's description of Tommy's fearfulness, his tendency to cry, and his reluctance to play with other children, suggested that personality problems connected with his trouble in doing school work might be present.

After a few interviews with the psychiatrist it became evident that his trouble with school work was due to a specific disability in reading and spelling. Indeed, he was willing and eager to learn to read and could respond very well to suitable remedial teaching. It was discovered that Tommy was learning words by depending entirely on his exceptionally good visual perception and memory, and that he had never begun to associate the names of letters and words with the written symbols for them. In other words, to him, spoken and written words were quite separate things and he did not think of them as being at all related to each other. His dislike of school and his apprehensive attitude in the classroom disappeared as soon as his reading improved.

It was also found that Tommy's fears and unhappiness were not symptoms of neurotic conflicts any more than was his trouble with school work. Instead, Tommy was afraid that his mother would scold and punish him and was unhappy over her dissatisfaction with him. Tommy's avoidance of other children appeared to be due to his mother's restriction of his friendships with them. She disapproved of playmates who might teach him rough ways, and considered most of the neighborhood children in that category. Moreover she wanted him to work on his lessons instead of "wasting time" in play. Tommy's parents often used him as a scape goat on whom they took out the anger they often felt for each other. Therefore, Tommy's fearfulness was simply a natural response to harsh treatment.

Tommy's case illustrates the fact that failure in school may be due to an actual disability on the part of the child, and that associated with this disability there may be other contributing factors in the personality background which need attention.

3. Another case from the same clinic[6] is that of a nine-year-old boy, Arthur. He was brought to the clinic by his mother on the recommendation of the doctor to whom she had taken the child when neighbors complained of his sexual activities with the other children of the neighborhood. Arthur was an only child of a family who lived in a small house near the railroad tracks. Investigation revealed that there was considerable conflict in the home between the parents with talk of separation and a divorce. Arthur usually slept in the same bed with his parents, and had either observed or had heard them having intercourse. He had developed an intense preoccupation with sexual matters and had a deep sense of guilt with fears and fantasies of death and punishment arising from his attendance at church where he had been impressed with the sinfulness of sex misconduct. Arthur was having a great deal of difficulty at school, although his I.Q. proved to be average—95. He did not like school because the work was difficult for him and he talked of having failed.

In the interpretation of Arthur's case at staff conference the following appears: "His school difficulties, too, may be related to emotional conflict. There are the additional factors of faulty work habits and a possible reading disability. It may be that he is so preoccupied with his parents' quarrels and the possible break-up of the home that he cannot concentrate on his schoolwork. One gets the impression from the case worker's interviews that, as the only child, he has been indulged by his parents, a fact which may also contribute to his poor work habits."

With psychiatric treatment Arthur gradually lost his fears and preoccupation with sex and his school work greatly improved. Three and one-half years

after treatment had been started Arthur's teacher reported that Arthur was showing real interest in his school work and doing quite well. The teacher said she was surprised at his ability for she had thought him dull.

Arthur's case is an illustration of failure in school and in his interpersonal relationships which proved to be due to a faulty home environment resulting in an actual neurosis. After adequate psychiatric treatment and an improvement in the home situation the child was able to succeed in his school work and develop satisfactory relationships with other children.

The Solution to the Problem of Success and Failure

What is the solution to this problem of success and failure? How can we prevent it from becoming a problem?

In a broad sense it seems that we must begin a program of re-evaluation and re-education in much the same way that we are now attempting to deal with racial problems. We need to realize that most of the population who are below the accepted level of normal intelligence are capable of becoming, with proper training, useful citizens. In addition, as indicated above, we must look for other causes of failure besides that of mental deficiency, realizing that there are many other factors which may interfere with the proper application of even normal intelligence.

More specifically we must accept the fact that not all of our sons and daughters, either need, or should have, a college education; and, in some instances, not even a high school education. We must allow our children to grow up to be themselves, and not replicas of ourselves as we wish we were; and we must teach our children by our own example to have respect for, and appreciation of, those who are intellectually less fortunately endowed.

Many of our school systems have made great strides in the handling of the exceptional child. Curriculae have been made more flexible, instead of being designed strictly for the average student. Democratic, rather than dogmatic, practices have come into our school rooms. The old-fashioned report card is giving way to the individual letter from the teacher to the parent setting forth the pupil's progress and capabilities. For the definitely retarded child special rooms or schools have been evolved where these children may progress, removed from competition, each at his or her own rate of speed.

As the deleterious effect of failure has become known there has developed a movement to establish a policy of "no failures" in some school systems. Recent research studies, as reported by Mr. Tyler in the article previously referred to, indicate that success is a powerful motivating factor in the development of children. These studies also indicate that success gains its major significance only in relation to falure. "Hence failure does have the function in human life of giving meaning to success as the avoidance or alternative to failure. It has a social function in helping a person who experiences failure to understand and appreciate the failure of others. Occasional school failures prepare the individual for meeting the occasional failures of later life. Having learned that he can take failure he does not regard it as a catastrophic experience." Mr. Tyler goes on to say, "The conclusion that might safely be drawn from recent studies in this field is that each child's learning requires a balance of success and failure—much more success than failure, but some of both."

Mr. Tyler does not suggest how this balance is to be achieved, and I am afraid my competence does not permit any suggestions along this line. The point of major importance is that the moral stigma of disgrace must be removed from failure so that every child, whether he succeed or fail, will still feel loved and appreciated for the capabilities he does possess. Then he, in turn, will be able to develop an out-going personality, and be capable of loving and living in harmony with his fellows. If this can be achieved, crime and delinquency will become one of our minor problems.

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Rapid Rehabilitation of Disabilities of the Knee

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The persistence of instability of the knees in many instances following disease, injury or surgery of this joint is well known. Frequently such instability results in additional injury to the menisci or joint ligaments so that the dysfunction tends to be continuous and even progressive. The symptom of which the patient most often complains is an unpredictable giving away of the knee when weight is borne on it. This usually occurs when the knee is slightly flexed, as on going up or down stairs, walking down a slope, or even standing on the involved leg. Inasmuch as this symptom is that of quadriceps weakness it is the purpose of this paper to call attention to the value of a specific type of quadriceps exercise in correcting this weakness and thereby producing knee stability.

The principle of progressive resistance exercises, introduced by DeLorme,[1] and since employed by many others[2] differs from conventional pulley weight exercises in several important respects. With the progressive resistance exercises the quadriceps is loaded uniformly throughout the arc of motion. In pulley weight exercises the weight load on the quadriceps diminishes with progressive extension of the leg; specifically, it varies with the sine of the angle subtended by the pulley rope and the tibia-femur axis.[1] Since the vastus internus component of the quadriceps acts most powerfully in the last 15 degrees of leg extension and functions as a stabilizing agency in complete extension, pulley weight exercises fail to load the muscle at the most vulnerable point so far as its knee stabilizing function is concerned.

With progressive resistance exercises emphasis is placed on power development by progressively loading the muscle in the manner to be described subsequently. In contrast, endurance is developed by pulley weight exercises through repetition of movement against a constant weight load. The known weakness of the quadriceps in knee injuries requires for its correction a power or strength-building exercise rather than one which develops endurance without muscle power.

Material

This series is composed of 82 cases referred to the Department of Physical Medicine, Watkins Memorial Hospital, University of Kansas. Without selection or exclusion these cases were classified into one of three groups:

Group I. Injury Without Operation. Fifty-eight cases; 53 males and five females. All had sustained injury to the knee joint and related structures as a result of sports activity or direct trauma. Treatment of the type to be described was instituted six weeks or longer after injury, although a few cases were treated a week after injury and a few several years after injury.

Group II. Post-operative. Sixteen patients; all males. Menisectomy had been performed in 11 cases, patellectomy in two cases, removal of a Baker's cyst in two cases and surgery for osteochondritis dissecans in one case. The majority were seen three to four months after operation.

Group III. Miscellaneous. Eight patients; six males and two females. Two had residual weakness following fracture of the neck of the femur. Two had traumatic arthritis, the sequel of old injury to the knee. One had had poliomyelitis many years previously. Two patients had chronic arthralgia of the knee of undetermined etiology. One patient had multiple sclerosis.

All patients objectively demonstrated gross atrophy of the quadriceps. All demonstrated instability of the knee joint in varying degrees. All patients subjectively had the common complaint of a feeling of weakness in the affected knee joint and insecurity on weight bearing. Although the majority were college age adults, six of the total were beyond the age of 40 and one was 85 years of age.

Method

Each exercise period was preceded by immersion of the extremity in the whirlpool bath for 20 minutes at a water temperature of 105 degrees. This was done not only for the purpose of providing the active hyperemia necessary for the exercises to follow, but also to facilitate relaxation from any muscle tightness or spasm that might be present.

The exercises proper were carried out according to a rather rigid routine. All patients received the same general instructions as follows:

1. Never begin exercise with heavy weights. Start with light weights and increase.
2. Raise and lower the weights slowly at the same rate of speed.
3. Avoid sudden jerky motions.
4. Practice complete flexion and extension with each contraction.
5. Pause between contractions and momentarily relax the muscle.
6. Concentrate on the muscle being exercised.
7. Never do more than 10 contractions with one weight.

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8. Total number of contractions for any one exercise period should be between 40 and 80.

9. Exercise only five days a week.

10. Exert the maximum effort once a week.

In performing the exercises the patient was seated on a table with a pad or sandbag under the distal portion of the thigh as shown in Figure 1. This position was necessary since it has been shown[3] that an angle of approximately 15 degrees between the femur and the top of the table is the position most advantageous mechanically for quadriceps action. The metal "boot" was then strapped to the shoe and the exercise sequence begun. The beginning and mid-point of the exercise sequence are shown in Figures 1 and 2.

The first series of 10 contractions were accomplished without weights attached to the boot. Weights in increasing amounts were then added, 10 contractions being accomplished for each weight. Ultimately a weight was found which the individual could just lift 10 times; a greater weight could not be lifted the requisite number of times. This weight value was termed the Ten Repetition Maximum and represented a limit for the day's exercise. This same sequence was carried out Monday through Thursday, beginning each exercise period without weights and exercising the muscle against the same weight increments through the Ten Repetition Maximum. On Friday the same procedure was carried out as for the preceding days except that the effort was made to establish a new Ten Repetition Maximum. After the Ten Repetition Maximum had been concluded, the exercise sequence was continued, lifting each weight increment twice until a weight value was found which could be lifted but one time. This weight value was termed the One Repetition Maximum and served as an index of the maximum strength or power of the muscle at that time. Thus on Friday of each week the Ten and One Repetition Maximum were reestablished. The Ten Repetition Maximum thus found constituted the new maximum for the following week's exercise. No exercise was done Saturday or Sunday.

It should be noted that the submaximum effort (Ten Repetition Maximum) was exerted five days weekly; the maximum effort (One Repetition Maximum) was exerted once weekly. This rigid routine provided a satisfactory control over the exercise dosage which was essential to avoid the possible harmful effects of over-exercise as well as the wasted effort of under-exercise. A careful record of the type shown in Table I was maintained for each patient. This was done primarily for the control needed for the exercise dosage but also served as a valuable psychological means of maintaining the patient's interest in his progress.

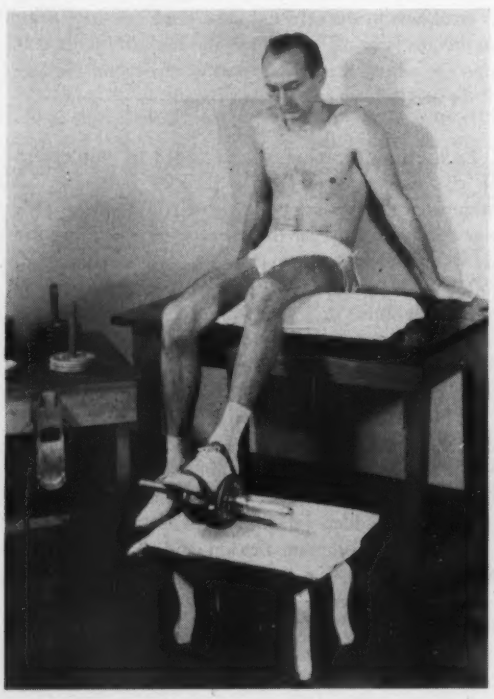

Figure 1. The beginning of the exercise sequence.

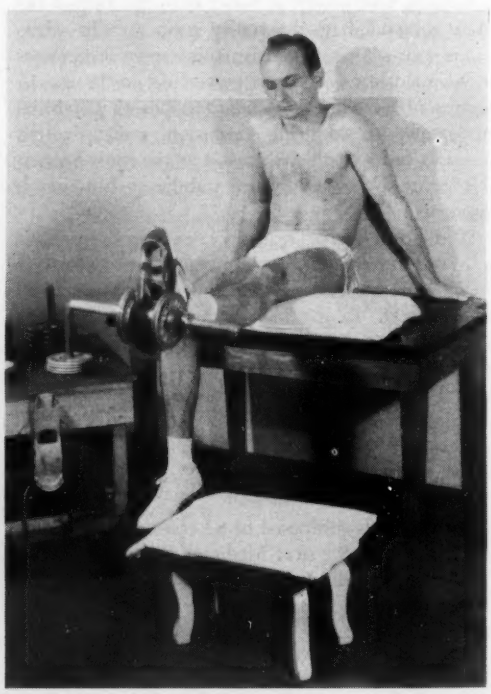

Figure 2. The mid-point of the exercise. Emphasis is on complete extension of the leg.

Results

The results may be tabulated in summary form as follows:

Group	Number of Cases	No Improvement	Improvement	Functionally Normal
I. Injury	58	2	13	43
II. Post-Operative	16	0	4	12
III. Miscellaneous	8	1	6	1

In Group 1, the two cases which failed to improve were subsequently found at operation to have tears of the menisci. These cases are not included in Group II for the sole reason that they had received progressive resistance exercises prior to surgery and would thus have differed from the remainder of the group in this respect. In Group III, the patient who failed to improve had traumatic arthritis following injury to the joint sustained a number of years previously. The joint consistently remained painful on exercise and treatment was electively abandoned after three week's trial.

Table I illustrates the improvement in strength of the quadriceps in a typical case. There was nothing distinctive about the response among the patients of the three groups.

The 85-year-old patient is worthy of special comment. Twenty-five years previously she had sustained a fracture of the neck of the femur. Subsequent aseptic necrosis of the head of the femur left a residual 2½ inch shortening of the affected leg. With her advancing years, ambulation had become increasingly difficult to the point of virtual incapacity at the time she was first seen. No attempt was made to carry the exercise dosage to either the One or Ten Repetition Maximum, but rather a dosage was chosen which was felt to be safe, and the effort was made to increase this weekly. The increase in strength noted in Table II enabled ambulation at will without aid other than a cane for purposes of stability.

With the exception of the three cases noted above in which no clinical improvement was noted, all

TABLE I

Name: H. V. S. *Age:* 18 *Height:* 6' 2" *Weight:* 215
Diagnosis: Sprain, medial collateral ligament, knee, left, 9-26-49.

	Weights Lifted Week of							
No. of Contractions	2-4-50	2-16-50	2-23-50	3-2-50	3-14-50	3-23-50	3-30-50	5-4-50
10	0	0	0	0	0	0	0	0
10	5	7½	7½	12½	15	15	15	20
10	10	12½	12½	22½	25	25	25	30
10	12½	15	17½	25	30	35	35	40
10 R.M.	12½	15	17½	25	30	35	35	40
1 R.M.	15	17½	20	30	35	40	40	45
Rt. Quadriceps								
10 R.M.	17½			25		35		40
	20			30		40		45

TABLE II

Name: Mrs. C.E.B. *Age:* 85 *Height:* 5' 2" *Weight:* 105
Diagnosis: Atrophy, disuse, quadriceps, left, secondary to fracture, old (1925), femur, neck, left.

	Weights Lifted Week of					
Contractions	10-31-47	11-7-47	11-21-47	11-28-47	1-6-48	1-12-48
10	0	0	0	0	0	0
10	1½	1½	1½	3	3	3
10	3	3	3	4½	4½	6
10		4½	4½	6	6	7¼
10		6	6	6⅝	6⅝	7⅞
10			6⅝	7¼	7¼	8½
10			7¼	7⅞	8½	9⅛

patients increased the strength of the quadriceps by at least 100 per cent during the first month of treatment. In those instances wherein muscle atrophy was severe, the increase in strength was much more than this, a four- to five-fold increment frequently being attained during this period. This improvement in strength was reflected clinically in terms of less pain in and swelling of the knee, greater stability of the knee in walking or standing and lessening of the feeling of insecurity in use of this member. In the majority of instances apparent recovery resulted.

It should be emphasized that there was no alteration in the anatomical changes which had been produced as a result of the injury. A joint which was lax as a result of ligamentous injury remained lax when the quadriceps was at rest. Normal use of the hypertrophied muscle, however, resulted in functional stabilization of the knee joint.

Discussion

There may be question as to whether the exercise procedure was the cause of or coincident with recovery. The long treatment period invites such suspicion. However, inasmuch as these patients all demonstrated weakness, pain, swelling and instability of the joint prior to treatment, regardless of the interval between injury and treatment, and 70 per cent of the group were completely asymptomatic before the conclusion of the treatment course, the conclusion seems valid that the treatment procedure was responsible for this improvement.

The procedure is quite simple and easy to accomplish. In a smaller series of cases not included in this study, equally good results were obtained by the use of apparatus readily constructed at home and a program carried out entirely at home. The boot, its straps and weight bar may be substituted for by a shoe with a broomstick cleated to the instep just ahead of the heel. The cast iron and aluminum weights were satisfactorily replaced by bags or sacks in which known amounts of dry sand were placed. A heating pad or simple massage provided a fairly good substitute for the circulatory stimulation of the whirlpool bath. The apparent complexity of the apparatus is, therefore, no bar to the home use of this program. There is, however, no substitute for the rigid employment of the exercise sequence and the patient must be willing to keep the necessary records in order to control the exercise dosage.

The effect of cross education, first noted by Hellebrandt and her associates,[4] is evident in the figures shown in Table I. Apparently as a result of facilitation at the spinal cord level, the unexercised extremity will exhibit a moderate increase in strength similar to that noted in the involved extremity but of a lesser degree. This finding emphasizes the role of the neural component of muscle action and supplies additional proof of the need for heavy weight loads which call forth the greatest response effort on the part of the neural mechanisms.

Conclusions

Eighty-two patients with the common complaint of pain in and instability of the knee were subjected to progressive resistance exercise of the quadriceps.

Fifty-six patients (71 per cent) achieved clinical remission by this means. Twenty-three patients (28 per cent) were improved. Three patients (four per cent) were unimproved and two of this group ultimately were operated on with removal of a fractured meniscus.

The large majority of the patients were college age adults, healthy except for the knee disability. The few older patients included in the series responded as well to the procedure as did the younger group.

The effect of cross education was repeatedly noted throughout the exercise series.

The exercise program, although rigid in its employment, was easy to incorporate into the daily activities of the patient and necessitated only the keeping of accurate records and the willingness to engage in a treatment procedure which covers a reasonably long period of time.

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The Use of the Laboratory in the Diagnosis of Liver Disease*

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Laboratory aids to the diagnosis of disease of the liver or so called "liver function tests" have been proposed and used in great number and variety. The experience of many workers in the field has led to relatively standard interpretability of these aids. From the many "tests" a group can be selected for performance by a good clinical laboratory and be of practical aid to the clinician. This report proposes such a group.

Before this choice, several limiting qualifications must be stated. No single liver function test can stand alone as of significance; each can be positive because of disturbance of physiology elsewhere than in the liver, each can be negative in the presence of extensive liver damage. Therefore, a group or spectrum of tests must be made, both to elicit selective disturbance of liver function and to reduce error by numerical probability. Tests vary in sensitivity and likelihood of positive result with varying diseases or stages of disease. The choice of tests in any specific instance requires knowledge of the basic physiology of the liver and its alteration in disease. To be useful to the practicing clinician all tests should be readily adaptable to the average clinical laboratory and should be referred to with reasonable frequency in the literature upon liver disease. Where a substance is offered to the liver for clearance (tolerance tests), one occurring in the usual metabolic or excretory function of the liver is preferred to one foreign to its usual economy.

Some activities within the liver do not lend themselves to ready technics of laboratory observation. Circulatory phenomena, regulations of circulating blood volume and body heat, are such functions. The endothelial lining of the sinusoids may affect the metabolism of blood pigments, blood proteins or the tolerance of foreign dyes, but this activity is not independently measurable. The embryonal function of blood formation is obviously not of interest here.

Liver function tests then are essentially dependent upon the activities of the parenchymal cell-endothelial lining combination or upon flow of excretion through the biliary tree. They measure alteration from the normal of substance offered to the body, substances influenced by parenchymal liver cell activity.

Knisely's schematic drawing of the frog liver lobule[3] (Figure 1) is a sound anatomic diagram upon which a conception of function can be based. If the magnification, so to speak, of this diagram be increased and the field reduced a single parenchymal cell can be seen adjacent to the sinusoid and blood stream on the one hand and the bile canaliculus on the other (Figure 2).

Metabolites are received by this cell from the blood. They are there usually changed by the complex physico-chemical functions of the cell to be excreted into the biliary tree, returned to the circulation in altered form, or stored against subsequent metabolic demand.

Interference with function can be seen to result from injury to the cell by inflammation as in infectious hepatitis or toxic damage, by obstruction of excretory flow as in choledocholithiasis, by reduction of blood flow and tissue oxygen as in passive congestion, or by inadequate supply to the cell through alimentary insufficiency or qualitative starvation.

These types of liver injury are seen more often in combination than singly. Inflammation about the parenchymal cell, by contiguous spread and edema,

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FROG LIVER LOBULE

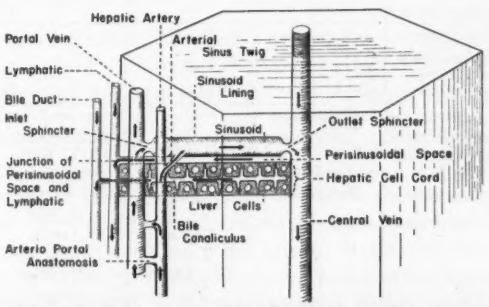

Figure 1. Diagram courtesy of M. H. Knisely.[3] Anatomical relationships of the living liver lobule.

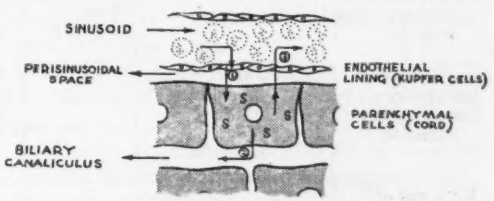

Figure 2. Schematic relation of parenchymal cell and sinusoid. Arrow (1) indicates progress of metabolites from sinusoidal blood stream via endothelial lining to parenchymal cell. Arrow (2) indicates excretion by parenchymal cell into biliary tract. S indicates storage within parenchymal cell. Arrow (3) indicates return of stored or altered metabolites to circulation.

can obstruct excretory flow or allow resorption of bile through injury primarily about the biliary canaliculae and periportal radicles. Distal obstruction, through back pressure, will initiate similar resorption of bile and, if prolonged, result in damage to the parenchymal cell. Impaired blood flow and cellular nutrition must be present in varying degree. When the poorly understood selective sensitivities to injury of the multiple metabolic functions within the parenchymal cell are considered the need for multiple laboratory observation is plain.

These tests have long been divided into the excretory, those concerned with bilirubin behavior or excretion of foreign dyes, and metabolic, primarily of the handling of protein, fat, and carbohydrate. Many other metabolic elements, vitamins, hormones, minerals, inorganic salts and enzymes, are affected by liver cell function. Foreign organic compounds are detoxified, and proteins concerned with the mechanism of blood clotting are synthetized. Several of this miscellaneous group lend themselves to useful laboratory observation.

Chart 1 groups some of these tests by function and by sensitivity, feasibility in the average laboratory, and frequence of reference within the literature. Many proposed methods have not been included. Those chosen for further discussion are in italics.

In the main these tests have been thoroughly reviewed in recent literature[1,4,6,7,13,14] with adequate reference to technic. Watson and Hoffbauer[14] organized tests into groups constituting laboratory surveys termed profiles. The choice of tests below is patterned after that of Watson and Hoffbauer. The arrangement is similiar, and their normal values are used. Modification consists of incorporating all tests into a single hepatogram, reducing the number of tests used, realignment of the circumstances of their application, and the addition of the oral five-hour glucose tolerance curve. In the experience of the author this modification has proved practical in a small laboratory and furnishes excellent diagnostic and prognostic aid to clinical evaluation.

The excretory tests chosen are:

A. Bile Pigments

1. Urinary Bile by the Harrison Spot Method as positive or negative (Barium Strip Modification).

2. Urinary urobilinogen, two hour afternoon sample, expressed in Erlich units.

3. Serum bilirubin in mg. per cent; direct acting read at one minute, total at 30 minutes—recorded as total less the one minute component.

Watson and Hoffbauer[14] discuss these tests related to bile pigments at length. They present the cycle through which urobilinogen is represented to the liver by the portal circulation and can express

Chart 1. Classification of liver function tests in excrectory and metabolic groups by sensitivity, feasibility in the clinical laboratory, and comparability in literature. See text. Those italicized are discussed in some detail.

"TESTS"	EXCRETORY		METABOLIC			
CATEGORY	Bile Pigments	Foreign Substance Clearance	Protein	Carbohydrate	Fat	Other
Relatively sensitive. Feasible in clinical laboratory. Commonly comparable in literature.	Blood Bilirubin *1" Direct Total—1"* Urine Bile (*Harrison Spot*) (Methylene Blue) *Urine Urobilinogen*	*Bromsulfalein.*	*Cephalin Flocculation* *Thymol Turbidity*	*Oral 5 Hour Glucose Tolerance*	*Cholesterol: Cholesterol Ester Ratio*	*Prothrombin Time and Response to Vitamin K*
Very sensitive. Too difficult for routine use. Good research tools.		Bilirubin	Electrophoresis of serum proteins Globulin Fractionation.	Lactic Acid Clearance		Blood Coproporphyrin
Useful—but duplication of first category.		Rose Bengal	Colloidal Red Collodial Gold Zinc Sulfate Turbidity.			
Less accurate Less sensitive Less valuable duplicate.	Icteric Index Van Den Berg		Takata Ara *Serum Albumin* *Serum Globulin* Benzoic Acid conjugation.	Galactose Tolerance Levulose Tolerance		Serum Iron Serum Vitamin A 17 Ketosteroid excretion after androgen
Not a test of parenchymal function but useful in differentiation of jaundice.	Fecal Urobilinogen				*Serum Total Cholesterol*	*Serum Alkaline Phosphatase*

both excretory and metabolic activity. They point out that urinary bile may be present early in liver damage before serum bilirubin is appreciably increased. They review a conception of the source of direct and indirect acting serum bilirubin, an increase in the immediate reacting component measuring bilirubin and suggesting cholangiolar damage, an increase in the delayed reacting component measuring bilirubin-globin and suggesting retention jaundice.

Schaffner, Popper and Steigman[12] feel that the partition of prompt and delayed bilirubin is of little differential value in frank jaundice, that the explanation of the behavior of the two components involves the Kupffer (endothelial lining of sinusoids) cells rather than being phenomena of regurgitation versus retention. In the interpretation of these tests the possibility of prehepatic jaundice from excessive blood destruction or the absence of bile from the intestine because of complete obstruction must be considered. In either instance the measurement of fecal urobilinogen will clarify the question; less than 10 Erlich units per 100 gm. of feces indicates complete biliary obstruction, greater than 100 units suggests excessive blood destruction.

B. Foreign dye clearance.

1. Bromsulfalein retention in serum at 45 minutes after I.V. administration of five mg. per kilo of body weight.

The performance of this test is standard and well known. Its sensitivity compares well with any additional tests performed. It should be omitted in the presence of jaundice. Clearance of added pure bilirubin would be preferable as a substance normally handled by the liver; the author has elsewhere noted it as the most sensitive of excretory tests,[10] but expense and difficulty of preparation preclude its routine use.

The metabolic tests chosen are:

A. Protein

1. Cephalin cholesterol flocculation at 48 hours expressed as plus, +, ++, +++, or ++++.

2. Thymol turbidity in units.

3. Serum albumin and serum globulin in mg. per cent.

Two flocculation-turbidity procedures are chosen since there is evidence that they reflect different phases of fractional serum globulin abnormality.[6, 11] One may give aid where the other does not. Serum albumin or globulin levels are less sensitive to liver damage but their disturbance can suggest a greater extent of functional impairment. The determination of the electrophoretic curve of serum proteins[9] could well replace all other protein determinations as tests of liver function in accuracy and sensitivity, but the method is not yet applicable to the usual clinical laboratory. Turbimetric determinations may offer a feasible substitute.[8] In the author's experience the conjugation of sodium benzoate and glycine to form hippuric acid has not shown the sensitivity or general usefulness to warrant its inclusion.

B. Carbohydrate

1. The standard oral five hour glucose tolerance test (half hour observation omitted).

The usefulness of this procedure has been recalled by Moyer and Womack.[5] If persistence of hyperglycemia at two hours be taken as abnormal this is the most sensitive of the metabolic group. Its apparently consistent correlation with the other tests here chosen will form the subject of a later report. It is obvious that disturbance in sugar tolerance can reflect disease elsewhere than in the liver, but this warning need serve only to reiterate the principle of mukiple testing. The standard test is a routine function of any laboratory and can well replace the galactose tolerance procedure as a test for liver function or in the differential diagnosis of jaundice. It certainly meets the preference for a metabolite usual to the economy of the liver.

C. Fat

1. Serum cholesterol esters (esterified cholesterol) in ratio to total serum cholesterol.

This is the only commonly used expression of lipid metabolism in the study of parenchymal cell function. Normal cholesterol esters range about 65-70 per cent of total cholesterol.[2] The ratio is reduced in parenchymal disease. (This is the most difficult of the laboratory analyses chosen and the method must be rehearsed by laboratory personnel before it is dependable.)

D. Miscellaneous Metabolic

1. Prothrombin Time, Quick one stage method in per cent of normal.

As change in serum albumin and globulin, prothrombin time is not sensitive to slight or moderate degrees of disturbed liver function. Its determination is similarly valuable to imply, when reduced, more extensive degree of damage. If, further, a reduced prothrombin time fails to increase after parenteral administration of synthetic Vitamin K, serious liver damage is more clearly implied. It must be held in mind that the presence of free bile in the small bowel is necessary to absorption of the precursors of prothrombin, a fact highly important in biliary surgery.

Tests not of hepatic function, per se, are:

1. The use of the determination of fecal urobilinogen has been discussed above.

2. Serum total cholesterol may be elevated in biliary obstruction or cholangiolar damage.

3. Serum alkaline phosphatase in Bodansky units. The normal of four units is usually clearly elevated to levels of 15 or higher in bile duct obstruction and/or serious cholangiolar damage.

Abnormality in these elements may help to clarify the nature of jaundice when ititial laboratory survey shows increases in serum bilirubin but no clear pattern of damage to metabolic function.

Watson and Hoffbauer[14] report the level of blood coproporphyrin to be increased in persistent liver damage following infectious hepatitis after other observations have become negative. Serum iron, serum Vitamin A, and 17 keto steroid excretion are noted in Chart 1 to imply the wide range of laboratory observation possible in the study of liver disease.

The tests chosen, and italicized in Chart 1, have been arranged to constitute an hepatogram on a single hospital chart sized sheet (Figure 3). Group 1 is requested initially when liver disease is suspected: Urine Bile, 1″ and T-1″ Serum bilirubin, two hour urine urobilinogen, cephalin flocculation, thymol turbidity, and bromsulfalein tolerance. The latter is omitted in the presence of jaundice. These cover the excretory range and include the flocculation tests of serum globulin alteration. They are relatively sensitive and selective. They should indicate the existence of impaired function when ordinary laboratory methods will do so. If the first group indicates any degree of damage, Group 2, cholesterol ester ratio to total cholesterol and sugar tolerance curve, is then determined. Positive results confirm the laboratory evidence of parenchymal disease found in Group 1.

Where jaundice is present Group 4, total cholesterol and alkaline phosphatase, becomes valuable. They are both usually increased in obstructive jaundice or marked cholangiolar damage in hepatitis. In such instance increase in direct reacting 1″ serum bilirubin would be expected. In retention jaundice these increases are not characteristic. It must be remembered that pure obstructive or pure retention jaundice seldom exist. Back pressure and/or secondary cholangeitis will result in parenchymal cell damage. Parenchymal inflammation extends to the canalicular or early cholangiolar biliary tree with local obstruction, injury and extravasation of "direct" bilirubin into the perisinusoidal lymphatic space. Early in jaundice liver function survey can give selective diagnostic information with rise in bilirubin and alkaline phosphatase with obstruction on the one hand and rise in bilirubin-globin and positivity of the more sensitive metabolic tests with primary parenchymal disease on the other. Later, as one type of injury extends to and merges with the other, tests are of less differential value.

When severe disease is obvious both clinically and by the tests already performed as above, Group

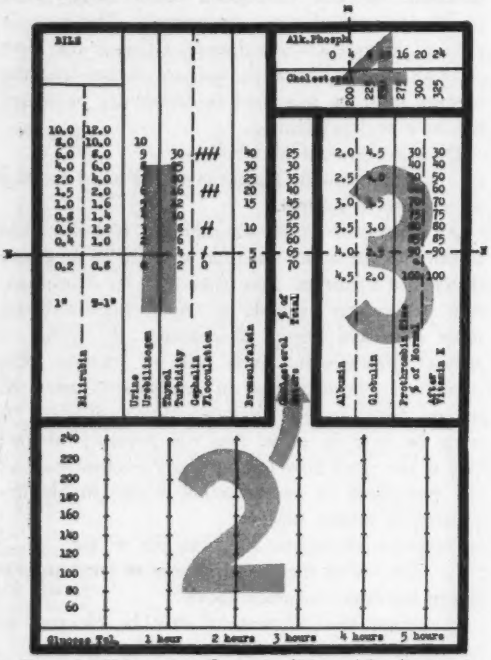

Figure 3. Hepatogram. Group 1: Urinary bile, direct acting (1″) and delayed (T-1″) bilirubin, urinary urobilinogen, thymol turbidity, cephalin cholesterol flocculation, and bromsulfalein clearance. Group 2: Five-hour glucose tolerance, per cent of cholesterol esters. Group 3: Serum albumin and globulin, prothrombin time in per cent of normal and re-observation after Vitamin K. Group 4: Alkaline phosphatase, serum total cholesterol. See text for detail and application.

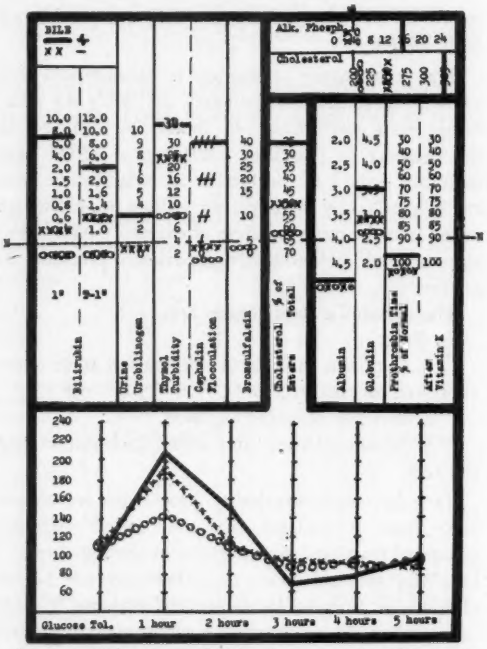

Figure 4. Male, age 29. Malaise, fever, anorexia and dark urine for 10 days. Yellow sclera for two days. Afebrile on admission. Moderate clinical jaundice. Liver tender but not enlarged. *Solid line indicates laboratory findings of admission survey.* Diagnosis: Infectious hepatitis with cholangiolar damage.

Treated by bed rest, diet, I.M. liver extract, methionine and choline. Asymptomatic in three weeks. *Crosses indicate interval laboratory survey.*

Partial bed rest, diet continued. Discharged after seven hospital weeks, two months following onset of illness. *Circles indicate final laboratory survey.* Note persistence of positive thymol turbidity.

3, serum albumin and globulin and prothrombin time, confirms severe damage. This is even more evident if parenteral Vitamin K (10-20 mg.) fails to improve prothrombin time. These two less sensitive observations have been useful mainly in helping to estimate the degree of damage in cirrhosis of the liver.

The author has found this hepatogram more valuable in following the progress of hepatic disease than in diagnosis, which more often than not can be made clinically. As more extensive damage is present the initial group, then cholesterol ester and sugar tolerance, then serum albumin-globulin and prothrombin time become abnormal. The reverse of this order is roughly true with recovery, though the vagaries of laboratory damage patterns offer many exceptions.

Mild to moderate cases of infectious hepatitis seem to recover quite rapidly clinically. The danger of relapse with too early activity has become well known with the increased incidence of this infection during and following World War II. Better evidence than clinical of persistent illness can here be had with persistent laboratory evidence of damage. When jaundice has subsided it is well to add bromsulfalein tolerance where previously omitted. It is the author's practice to maintain the patient recovering from infectious hepatitis on 24, 20 or 16 hours bed rest with restricted activity until laboratory evidence of damage has largely subsided. The exception is that the flocculation tests, cephalin cholesterol and thymol turbidity, more usually the latter, often remain positive in moderate range long after medical invalidism has ceased to be practical, economically permissible, or psychologically advisable.

Three hepatograms are shown illustrating their application in infectious hepatitis (Figure 4), obstructive jaundice from stone (Figure 5) and cirrhosis of the liver (Figure 6). Brief clinical information is appended.

This report has described the use of laboratory information in liver disease. There has been no intent to substitute the laboratory for clinical acumen. A history of grippal illness with anorexia and

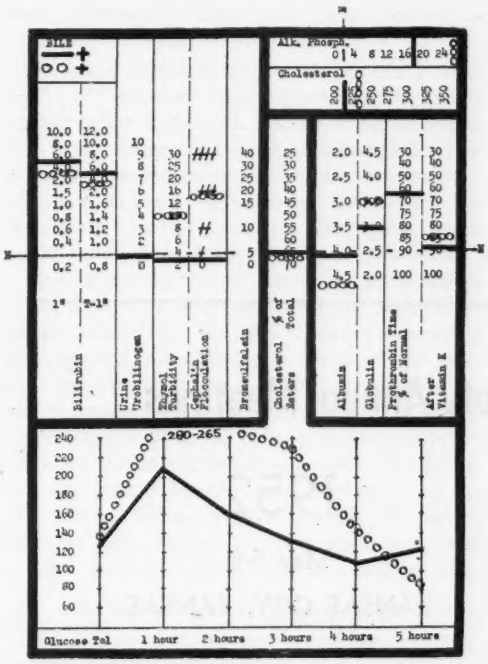

Figure. 5. Male, age 72. "Silent" jaundice two weeks, preceded by anorexia and dark urine. Stools light tan. Past history of gallstone colic 15 years before. Irregular fever to 102° F., WBC 10,500. Examination negative except for jaundice and colorless stools. Gastrointenstinal x-rays and flat plate of R.U.Q. negative. *Solid line indicates laboratory findings of admission survey. (Urobilinogen not significant with colorless stools. Note also rise of prothrombin time to normal with Vitamin K).* Diagnosis: Extrahepatic obstructive jaundice and cholangeitis.

Patient refused exploratory surgery. Treated with aureomycin and parenteral Vitamin K. Temperature fell to normal, though with occasional secondary rise. Color returned to stools and jaundice lessened only to rise again. Appetite recovered and patient felt well in two weeks. Ambulatory and continues under observation. *Circles indicate repeated laboratory survey after four weeks.* This suggests rising parenchymal damage from obstruction and cholangeitis. Probable diagnosis: Obstruction of common duct by stone.

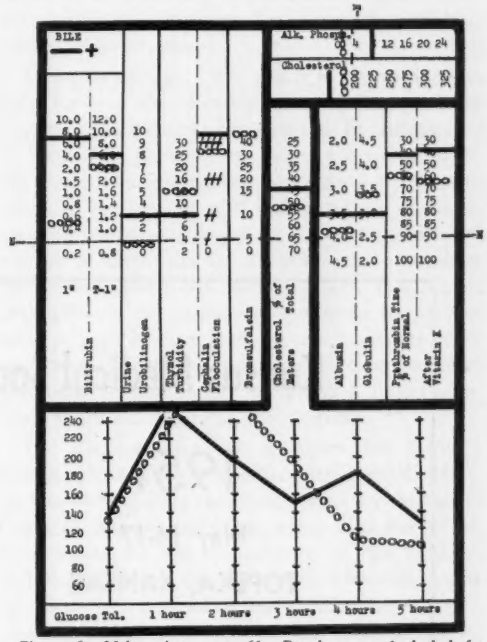

Figure 6. Male painter, age 61. Regular use of alcohol for years. Anorexia 40 days; evening edema of ankles 30 days; swollen abdomen, jaundice, shortness of breath, dark urine and light stools three days before admission. Jaundice, spider nevi, dusky skin, collateral veins in flanks, massive ascites and mental confusion were outstanding physical findings. *Solid line indicates laboratory findings of admission survey.* Diagnosis: Laennec's cirrhosis, decompensated.

Treated by bed rest, paracentesis x 2, transfusion x 5, I.V. glucose and diet, I.M. liver extract, methionine and choline. Initial period stormy. Loss of ascites and mental confusion in four weeks, gain in strength and weight at two months, ambulatory at three months. Discharged at six months with great clinical improvement and borderline hepatic compensation. *Final laboratory survey in circles* shows notable improvement only in direct 1" bilirubin or regurgitation jaundice. Evidence for severe chronic parenchymal damage persists.

the finding of a tender lower right costal area on first percussion in infectious hepatitis, colic and acholuric stool in choledocholithiasis, and spider nevi with collateral veins in the flank in cirrhosis are more than worth the weight of all laboratory findings. The great value of needle biopsy of the liver when indicated is outside of the scope of this discussion. The liver can be heavily infiltrated with carcinoma without laboratory evidence of damaged function. As in all disease the experienced clinician uses the tools at hand in proper balance.

Summary

A choice of laboratory determinations in the study of liver disease has been outlined. They were chosen as particularly applicable to the facilities of a good clinical laboratory. An hepatogram for inclusion of results on one page is presented.

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Primary Tumors of the Bladder: A Survey of 275 Cases*

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Bladder tumors have received a great deal of attention in recent publications in which the writers have discussed in detail the various methods of treatment. We present herewith an analysis of a series of 275 consecutive cases of primary neoplasms of the bladder treated on the Urological Services of the Pennsylvania and Bryn Mawr Hospitals. Its purpose is to present the data concerning this disease so that the patient with a bladder tumor may be better evaluated statistically as to type of tumor and prognosis, as well as the results of various types of therapy. The case histories were taken in chronological order, omitting those of patients who refused operation or who were referred only for consultation. Thirty-four cases were inoperable for reasons to be discussed later and 77 cases could not be followed adequately. These have been omitted in analyzing the results of treatment.

Our series consisted of 224 (82 per cent) males and 51 (18 per cent) females illustrating the greater predisposition of the male bladder to tumor formation. It is a disease of later life; 216 or 79 per cent of the cases in this series occurred between the ages of 51 and 80 years. About 35 per cent occurred in the seventh decade (Figure 1). The oldest patient was 88 years of age and the youngest, 16 months.

Bladder tumors will be found in approximately 50 per cent of patients complaining of intermittent massive hematuria. The most common presenting symptom was gross hematuria found in 235 cases or 85 per cent. This was frequently accompanied by dysuria, strangury, and frequency during the bleeding periods and often the patients had no subjective symptoms in the non-bleeding periods. The hematuria was usually intermittent. Frequency and dysuria without hematuria were noted in 22 cases or eight per cent. Suprapubic pain alone was noted in three instances, penile pain in a solitary case, left costovertebral angle pain and acute urinary retention in two cases; 10 cases were referred from other hospitals where treatment had been started and no presenting symptom was noted. The most unusual case presented complete anuria due to bilateral ureteral obstruction, generalized edema, associated with gross hematuria.

The duration of symptoms was variable, extending from six hours to 17 years. Forty-four per cent of the patients were seen by us within three months of the first attack of hematuria, and 55 per cent within the first six months. Many of these patients were under the care of physicians who treated them medically. Coincidentally the hematuria stopped, as the disease is prone to do without therapy. It would seem that the medical profession as a whole still needs to be reminded of the seriousness of hematuria, and the necessity for complete urological survey when it exists.

Strangely enough, there seems to be no relationship between the duration of symptoms and the degree of malignancy of the tumors. In one instance an inoperable papillary carcinoma was found covering the entire trigone and infiltrating the musculature of the bladder wall with a history of hematuria of one month duration. Another patient had attacks of hematuria for 17 years and a papillary carcinoma Grade I was found. Figure 2 is a graphic description of the duration of symptoms for papillomata or papillary carcinoma Grade I and the more malignant infiltrating papillary carcinomas. The percentage of tumors for each group is almost identical for various durations of symptoms.

The diagnoses for the neoplasm fall into 11 groups: papillomata or papillary carcinoma Grade I; unclassified papillary carcinoma; papillary carcinoma Grade II, III, IV, and those not graded but which have infiltrated the musculature of the bladder; nodular carcinoma; flat carcinoma; adenocarcinoma; squamous cell carcinoma; and sarcoma.

An explanation of these various types would be

*The author wishes to express his thanks to Leon Herman, M.D., Lloyd Greene, M.D., and Benjamin Hayllor, M.D., for permission to include their cases from the Pennsylvania and Bryn Mawr Hospitals in this report.

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Age and type of tumor	*16 mo.*	*21-30*	*31-40*	*41-50*	*51-60*	*61-70*	*71-80*	*81-90*	
Papillomata		3	8	15	29	40	10	1	106
Infiltrating papillary carcinomata			5	18	39	55	37	2	156
Squamous cell carcinomata				3	3	1			7
Adenocarcinomata			1	2	1				4
Sarcoma	1						1		2
	1	3	14	38	72	96	48	3	275

Figure 1. Age incidence for the morphological types of bladder tumors.

in order. We consider all tumors of the bladder to be malignant or potentially malignant. Hence we call papillomata, papillary carcinoma Grade I. Due to changes in the pathological departments of the hospitals over the years, some of the carcinomas are graded according to Broder's classification, some as to their tendency to invade the muscle, and some with no classification. Nodular carcinomas are the more malignant papillary neoplasms, and the flat carcinomas are most malignant. The classification according to morphology included adenocarcinoma, squamous cell carcinoma, and sarcoma. The papillary neoplasms as a group are by far the most common, comprising 95 per cent of this series, or 262 cases (Figure 1). Low grade malignant papillomata (Grade I) compose 39 per cent of the total in this series. Four adenocarcinomas were seen, seven squamous cell carcinomas, and two sarcomas. The remaining 57 per cent of this series are the more malignant infiltrating papillary carcinomas. The relationship between the various tumors and the patient's age is shown in Figure 1.

Biopsies were taken for diagnosis when the bladder was exposed for treatment and occasionally cystoscopic biopsy was done. One hundred forty biopsies were taken. Cystoscopic biopsy was rarely done for two reasons: (1) the degree of malignancy may vary markedly from different sections of the same neoplasm making small biopsy specimens inadequate, and (2) the cystoscopic appearance of bullous edema surrounding a broad base of tumor and necrosis of the neoplasm is good evidence of malignancy. The majority of the cases that were not biopsied were considered to be Grade I papilloma with some question as to whether they were cancerous or precancerous lesions. The remainder were those which were inoperable when first seen, either by evidence of metastasis or complete fixation of the bladder.

Most tumors are found at the base of the bladder. This is shown in Figure 3 which is a schematic drawing of the locations of neoplasm of the bladder in which each cross represents 10 bladder neoplasms.

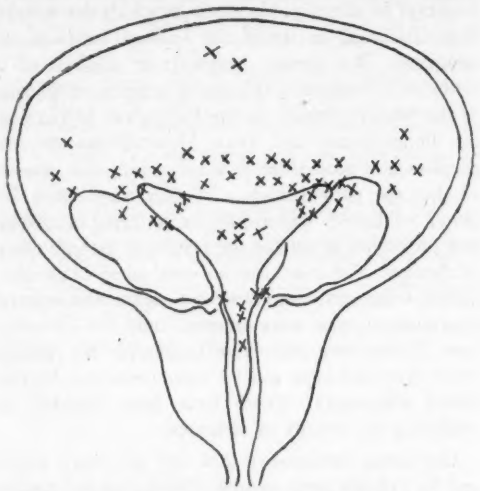

Figure 3. Diagrammatic representation of the predominant sites of bladder tumors. Each cross represents 10 tumors. Anterior and superior walls are omitted.

Ninety neoplasms on the anterior wall including the summit could not be shown in this diagram. Figure 4 shows the locations in the bladder of the 629 tumors. Adenocarcinomas are thought to be inclusions in the bladder and are found either at the trigone or near the urachus. In this series, none was seen in the latter position. The squamous cell neo-

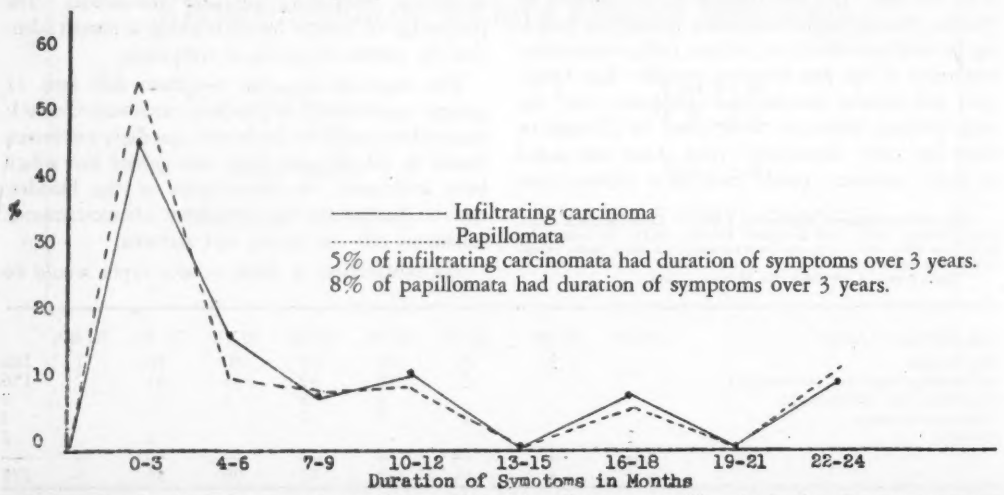

Figure 2. Duration of symptoms comparing papillomata with frankly malignant tumors. Note the duration of symptoms compares very closely for both.

Position of tumors	
Above right ureteral orifice	42
Below right ureteral orifice	21
Lateral right ureteral orifice	27
Medial right ureteral orifice	21
Above left ureteral orifice	56
Below left ureteral orifice	15
Lateral left ureteral orifice	32
Medial left ureteral orifice	20
Right lateral wall	34
Left lateral wall	46
Posterior superior wall	24
Anterior superior wall	21
Left anterior wall	14
Right anterior wall	14
Outlet 12 o'clock	16
Outlet 3 o'clock	14
Outlet 6 o'clock	23
Outlet 9 'clock	14
Superior wall	26
Central trigone	38
Posterior wall	98
Left superior wall	2
Right superior wall	0
Urethra	11
	629 tumors

Figure 4. Sites for 629 individual tumors.

plasms were also trigonal in position in three cases, on the left lateral wall in one, posterior superior wall in one, and no description was given in one case. The location of one sarcoma was not given. The other was on the right lateral wall. Two of the patients presented a bladder diverticulum concealing a papillary carcinoma. Partial ureteral obstruction from the bladder tumor was seen 49 times. The right ureter was obstructed 19 times, the left ureter 24 times, and both ureters six times. This resulted in hydro-ureter and hydronephrosis of various degrees of the corresponding kidney as shown by intravenous urography.

Most of the patients had complicating pathology. Of those patients presenting themselves with a bladder tumor, 57 per cent or 155 cases had some other pathological lesion, over half of which were urological in nature. The next most common complication was heart disease. The complete roster of complications is shown in Figure 5.

Pathological Conditions Complicating Bladder Tumors

BPH	83	Lupus erythematosis	1
Asthma	2	Extrophy of bladder	1
Hypertensive cardiac disease	11	Bladder diverticula	7
Renal TB	2	Urethral stricture	2
Buergers disease	2	Diabetes	7
Radium cystitis	1	Vesico-rectal fistula	1
Pagets disease	1	Vesico-vaginal fistula	1
Renal calculi	2	Epididymitis	3
Silicosis	2	Arteriosclerotic heart disease	37
Intestinal obstruction	1	Peptic ulcer	1
Hunner's ulcer	1	Hernia	4
Fibroids	2	Pyelonephritis	5
Nephroptosis	1	Ruptured bladder	1
Bladder calculi	4	Syphilis	1
Carcinoma of prostate	4	Carcinoma of rectum	1
Cholelithiasis	1		

Bladder rupture was through the tumor spontaneously.

Figure 5. The majority of the patients had one or more diseases in addition to a bladder tumor as would be expected in this age group.

Many methods were employed in treating bladder tumors consisting of: cystoscopic fulguration; cystoscopic fulguration and implantation of radon seeds; cystoscopic resection and fulguration; cystostomy with fulguration; cystostomy with fulguration and transvesical irradiation; partial cystectomy; and total cystectomy with transplantation of the ureters to the skin or colon.

Seventy-seven cases could not be followed adequately for various reasons. The results of the complete follow-up of 198 cases are presented.

Eleven patients refused surgery. Thirty-four or 12 per cent of the total cases were inoperable for various reasons. In 25 patients the tumor had perforated the bladder wall, and distant metastases were found in two others. Two were in extremely poor general condition, making any surgery too hazardous to attempt. Four died before surgery could be attempted, two each from coronary occlusion and acute pyelonephritis with uremia. The tumor in one other case had penetrated into the rectum in a vesico-rectal fistula. The balance of 153 cases received treatment.

Papillary Carcinoma

The end results of therapy of papillary carcinomata Grade I were good, regardless of the type of treatment used. Sixty cases have been followed to date. Nineteen of them have survived over five years without recurrent neoplasm at the present time. Fifteen more are alive with no tumor present less than five years, and four have died in less than five years from causes other than bladder neoplasm. Five died from other causes after five years. Two patients have survived without recurrent neoplasm for 20 years. It is interesting to note that one man was cystoscopically fulgurated elsewhere for a papillary carcinoma Grade I, 22 years before he was treated here for recurrent papillary carcinoma. Eight have died, the cause being directly attributable to the bladder tumor, two of them living seven years after the initial treatment. Nine are alive and have papillomata of the bladder necessitating frequent fulguration. One of the latter has lived 12 years since the initial treatment.

Recurrent papillomata are prone to be multiple and to occur at a site different from that of the original neoplasm. In this series of 71 cases, 44 or 62 per cent had recurrences. The largest number of tumors to be fulgurated at a single treatment is 14 and the largest total number treated is 32.

Figure 6 is a chart showing the results of the various types of therapy for 60 cases of this tumor.

Results of Treatment of Infiltrating Papillary Carcinomas	
Alive no tumor over 5 years	19
Alive no tumor under 5 years	15
Dead without tumor over 5 years	5
Dead with no tumor under 5 years	4

$$\frac{19 + 5}{60 - 19} = \frac{24}{42} = 57\%$$ 5-year "cures"

Figure 6. The results of therapy in infiltrating papillary carcinomas are good, regardless of the treatment used.

Twenty-four patients have survived tumor-free for five years or longer, 19 patients were treated less than five years. Thus, of the 60 cases of papillary carcinoma Grade I, the "five-year cure" rate is 57 per cent. There were no fatal cases from surgery in this group.

The results of therapy of the more malignant infiltrating papillary carcinomas are shown in Figure 7. It can readily be seen that the results of therapy in the more malignant neoplasms of the 84 cases are disappointing.

Including all types of therapy there were only six patients alive with no tumor five years after treatment was instituted, and four others died from other causes after five years. There are 21 patients who were treated less than five years ago and three who have tumors of the bladder under five years. Forty-one have died from the neoplasm, only one living longer than five years, that one dying 13 years after the first treatment. Using the same method of computation as for papillomata the "five-year cure" rate is 16.9 per cent. There were 10 deaths following operation. Three resulted from pneumonia, one from pelvic thrombosis, two from cardiac failure, and four from pyelonephritis. There were no deaths from hemorrhage or surgical shock. These date back to the period before the advent of the sulfonamides and penicillin.

Results of Therapy for Infiltrating Papillary Carcinomas of the Bladder

Partial resection of the bladder—9 cases			
Alive no tumor over 5 years	0	Dead no tumor over 5 years	0
Alive no tumor under 5 years	0	Dead no tumor under 5 years	1
	0%		
Transurethral resection and fulguration—7 cases			
Alive no tumor over 5 years	1	Dead no tumor over 5 years	0
Alive no tumor under 5 years	0	Dead no tumor under 5 years	2
	1		
	7-2 = 20%		
Cystoscopic fulguration—18 cases			
Alive no tumor over 5 years	1	Dead no tumor over 5 years	1
Alive no tumor under 5 years	3	Dead no tumor under 5 years	1
	2		
	18-4 = 14%		
Suprapubic fulguration and radon seeds—20 cases			
Alive no tumor over 5 years	1	Dead no tumor over 5 years	1
Alive no tumor under 5 years	1	Dead no tumor under 5 years	4
	2		
	20-5 = 13%		
Suprapubic fulguration—14 cases			
Alive no tumor over 5 years	1	Dead no tumor over 5 years	1
Alive no tumor under 5 years	0	Dead no tumor under 5 years	4
	2		
	14-4 = 20%		
Suprapubic fulguration and Phillips gun—7 cases			
Alive no tumor over 5 years	0	Dead no tumor over 5 years	1
Alive no tumor under 5 years	2	Dead no tumor under 5 years	0
	1		
	7-2 = 20%		
Cystoscopic fulguration and radon—4 cases			
Alive no tumor over 5 years	1	Dead no tumor over 5 years	0
Alive no tumor under 5 years	0	Dead no tumor under 5 years	1
	1		
	4-1 = 33%		
Suprapubic fulguration and phenol—1 case			
Alive no tumor over 5 years	1	100%	
Total 80 cases omitting the 4 cases of total cystectomy			
Alive no tumor over 5 years	6	Dead no tumor over 5 years	4
Alive no tumor under 5 years	7	Dead no tumor under 5 years	14
	$\frac{10}{80-21} = \frac{10}{59} = 16.9\%$		

Figure 7. The results are uniformly poor regardless of the treatment used.

There are three cases of papillary carcinoma Grade II who have lived five years. One other received an open fulguration and application of phenol to the bladder mucosa. He is alive five years later, and free from tumor. The third was treated by cystoscopic fulguration and is well nine years after treatment. One patient who had a Grade III papillary carcinoma is alive and well seven years following a partial cystectomy. No cases of papillary carcinomas, Grade IV, or nodular carcinomas are alive five years after treatment. One patient with flat carcinoma is alive with recurrent neoplasm six years after the cystoscopic implantation of radon seeds. There are no cases of papillary carcinoma invading the bladder musculature alive five years later regardless of treatment.

Adenocarcinoma, Squamous Cell Carcinoma, and Sarcoma

The adenocarcinomas show the same poor results. One patient was well for four and one-half years following a cystoscopic fulguration and implantation of radon seeds before he was lost from our records. One is free from tumor one and one-half years following a partial cystectomy and one died from pulmonary tuberculosis free from tumor, one year after a total cystectomy. A fourth died from the tumor 16 months following partial cystectomy.

The results of treatment of squamous cell carcinomas are similar. One case with exstrophy of the bladder died from extra-vesical causes seven years after the initial partial cystectomy. Two others who were followed succumbed to the neoplasm several months after operation. One sarcoma was inoperable with distant metastases. The other was treated by total cystectomy and died from the tumor in 22 months.

Because of the numerous methods of treatment employed in this series of the more malignant neoplasms, the number of cases for each type of therapy is too small to draw any definite conclusions. However, the percentage of "five-year cures" for each method is as follows:

1. Partial cystectomy—nine cases—10 per cent five-year cures.
2. Cystostomy and fulguration — 14 cases — 20 per cent five-year cures.
3. Cystostomy and fulguration with implantation of radon seeds—20 cases—13 per cent five-year cures.
4. Cystoscopic fulguration — 18 cases — 14 per cent five-year cures.
5. Cystoscopic fulguration and implantation of radon seeds—four cases—33 per cent five-year cures.

The number of cases shown above includes those treated less than five years. The percentage of five-year cures concerns only those treated more than five years ago.

The use of total cystectomy and transvesical irradiation is too recent to be included here.

Summary

1. An analysis of 275 primary tumors of the bladder has been presented with 198 follow-up studies.

2. According to our series, the patient consulting the urologist with a bladder tumor will probably be a male, between 60 and 70 years of age, complaining of intermittent gross hematuria which he has had about three months. There is better than an even chance he will have other pathology, half of which will be other urological diseases. The bladder neoplasm will almost surely be papillary in character and the chances of it being a Grade I tumor are about four in 10, in which case he has a 57 per cent chance of being alive five years hence. If it is more malignant, he has only a 16.9 per cent chance of living five years. The neoplasm will probably be found at the base of the bladder.

3. With the exception of papillary carcinomas Grade I, the present methods of treatment are disappointing, but from reports of other writers no more than at any other clinic of this kind.

MAKE HOTEL RESERVATIONS NOW

ANNUAL MEETING KANSAS MEDICAL SOCIETY

TOPEKA, KANSAS MAY 14-17, 1951

PRESIDENT'S PAGE

Dear Doctor:

During the past six weeks I have had the pleasure of receiving messages from hundreds of you which can be classified into three categories; first, those which expressed appreciation; second, those which expressed confidence; and third, those which expressed cooperation and a genuine willingness to be of help if needed. These were all sincerely and profoundly appreciated and were a source of real joy to me, but also they were a challenge to me to do more and better work in the service of the Kansas Medical Society.

Your appreciation is accepted. I am having a lot of fun and a wonderful time being your presiding officer, and the compensation comes in constantly meeting with and working with the grandest fellows one could ever have the pleasure of knowing. Your confidence is cherished, but I hasten to assure you that our Society could not be what it is today if it were not for the genuine interest and help which you men have shown and also for these same attributes which our predecessors handed down to us. Your cooperation and willingness to help make me feel very humble, for I do lean heavily upon all of you and, guided by your opinions and advice, I assure you that all of your officers will be willing to double their efforts for Kansas medicine.

Our committees are functioning exceptionally well. I have had the opportunity to see a number of them at work and it is a source of extreme satisfaction to observe their serious deliberations. My thanks and appreciation for time and effort go to all the chairmen and committee members.

I sincerely hope that I have expressed to you the joy and satisfaction, the humility and the challenge which you have heaped upon me with your messages. Thank you and thank you again.

Sincerely, your president,

F. R. Crozier M.D.

EDITORIAL COMMENT

Where? Oh Where?

It is an interesting merry-go-round to attempt to figure out just how the administration is going to raise some of the funds to propel some of the paternalistic schemes that are proposed in a very sublime but polished and powdered way in the report and platform of the Midcentury White House Conference on Children and Youth.

Now let's see. We will place a parity on eggs, wheat and butter so that the farmer can have "a secure home that is free of want" and so he can not only pay a higher price for his own wheat when ground into flour but so he can pay more income tax and sales tax and hidden taxes, so that the government through "aid to education" can educate more people who buy a part of the wheat and the butter and the eggs, paying parity prices and local taxes so that they, along with the farmer, can finance the government so they can elevate the income of the low income groups "through supplementing the earnings of the head of the family out of public funds" so they can keep up with the Jones and buy more eggs and flour and butter at government established parities, to help elevate the sociologic standards and income of the farmer so that he can pay more taxes to—

You figure it out. We are getting dizzy. Perhaps some of our governmental paternalistic planners have gone around the vicious circle of more and better taxes to do more and greater things, each time with an operational take, and have become so dizzy that they can't think straight either.

Perhaps—But We Can't Believe It

On January 15 President Truman proposed to Congress that they pass on to the taxpayers a $16,000,000,000 boost in taxes.

We believe that we can all envision the necessity of national defense. We fought for our freedom in the first place and we have fought to preserve it. We engaged in and recovered from a civil war in order to preserve our individual rights as citizens of a democracy.

But does Mr. Truman stop at increasing expenditures for defense? No. He harps back on the "Brannan Plan" and a "National Health Insurance System." Certainly these two "New Deal" or "Fair Deal" nightmares would make the founders of the Democratic Party turn over and bury their faces in shame, should they ever be passed with the approval of even the present "Democratic Party."

Now Mr. Truman seems to worry a lot about catastrophic expenditures in the family budget when it comes to paying a fee for services rendered by a non-profit hospital and by a physician. But what about the catastrophic income tax bill and all of those bits of hidden revenue on innumerable items such as telephone service, cosmetics, railway fare and many others that we have probably never heard of. Does that cause him concern? Does that give him a headache? Does that give him sleepless nights?

Instead of importing many thousand employees into Washington to help out in our defense program, why can't we transfer a few thousand from Mr. Ewing's department and a few thousand from one or another of the many governmental agencies whose activities now are certainly less important that the defense of our nation.

Since 1940 we have done much talking about critical materials and priorities. Certainly now we would all agree that our Number 1 priority is defense and our most critical material is money. If, by government order, we can in our individual economies strike out all usage of critical materials in non-essential production so that they may be used for Priority 1 or 2, then by the same yardstick certainly the government can do likewise.

Perhaps we can year by year increase our expenditures over our basic income and still continue to remain solvent—but we can't believe it.

Perhaps our individual taxpayers will continue to work harder and longer hours each day in order to pay more taxes to create more, and bigger, irresponsible agencies—but we can't believe it.

Perhaps we can tax ourselves into governmental servitude and still maintain our four freedoms—but we can't believe it.

V.A. Changes Medical Director

Dr. Paul B. Magnuson was relieved of his duties as medical director of the Veterans Administration on January 15, 1951, after more than two years of service in that capacity. Dr. Magnuson said, "I'm fired as of today." V.A. Administrator Carl R. Gray, Jr., announced he was accepting a previously presented resignation.

Dr. Magnuson has been a supporter of the policy that V.A. hospitals should be directly under the medical department and that the V.A. should not open other hospitals until they could be adequately staffed. Dr. Magnuson is to be admired for his persistent stand to maintain the highest possible medical standards in the hospitals under his direction and not to stoop to the dilution of medical talent to a point of ineffectiveness, in order to put on a great "administration" show. The apparent policy of the Veterans Administration reminds one of a fa-

mous speech about 1942 in which an oft repeated statement was, "We have on hand or on order."

Of what value to a veteran is a hospital bed, if there is no trained personnel to care for him?

It is to be hoped that Admiral Joel T. Boone, a man exceedingly well versed in governmental medicine, will carry on in the high planes of professional standards that he has been known to advocate in the past, and along the conservative, yet progressive, policies that Dr. Magnuson instituted.

Medical History of Sedgwick County

Although it is always difficult to attach the proper historical significance to contemporary events, it is often impossible to secure accurate information if too much time is allowed to elapse between the date on which an event happens and the date on which it is recorded. It is fortunate, therefore, that a history of the Sedgwick County Medical Society has been compiled at this time. Many persons are still living who can tell of events in the pioneer days of Sedgwick County, and the passage of some 60 years since the first medical meeting was held in Wichita permits evaluation not possible before. Dr. Howard C. Clark, Wichita, performed a great service for his society in preparing this history and assembling many old photographs and prints as illustrations.

The introductory chapter describes the Indian village on the site that is now Wichita and tells of the influx of pioneers to that location on the banks of the Arkansas River. The first physician to locate there was Dr. William Umstillor, who arrived in 1867 as post surgeon for Company H, Fifth U. S. Infantry. Second was Dr. E. B. Allen, who began practice in 1869 and became a leading citizen of the new community, serving Wichita as its first mayor and later becoming a member of the Kansas legislature and lieutenant governor of the state. Third was Dr. Andrew H. Fabrique.

Dr. Fabrique, known as "Fab," opened his office in Wichita in September, 1869, and figured prominently in all medical activities there until his death in 1928. Dr. Clark devotes a chapter of his book to Dr. Fabrique, his influence on medical events and the Wichita physicians, "Fab's boys," who learned much of medicine and the problems of human relationship through association with him. Many of Fab's boys, proud of that name, are practicing in Wichita today. As evidence of Fab's distinction, it is recorded that he was made president emeritus of the Sedgwick County Medical Society in 1924.

Not too much emphasis was placed upon the educational qualifications of physicians in the early days, and the history records many instances of those who began practice without much medical background. "Some had actually studied hard at medicine," Dr. Clark reports, "and others had merely glanced at a medical book as they drifted in the westward tide. Some saw the vast plains as an opportunity to sell the scattered pioneers any sort of a bill of goods—even doctoring, if possible . . . Some had degrees, and others had beards and personality. Many dated from the Civil War, with doubtful scientific knowledge but excellent bedside manners."

In 1885 the state legislature decided to enforce the Medical Practice Act of 1870, which required that each physician register with the county clerk, giving his name, school of practice, name of medical college and place of graduation. Another portion of the law provided that "in all cases where any person has been continuously engaged in practice of medicine for a period of ten years or more, he shall be considered to have complied with the provisions of this act, and where persons have been in continuous practice of medicine for five years or more shall be allowed two years in which to comply with such provision." Some who registered classified themselves as homeopaths, others defined their schools as regular, eclectic and magnetic. Several midwives in the county also registered.

The range of pioneer illnesses included malaria, typhoid, dysentery, pneumonia, la grippe, bilious fever, tuberculosis, diphtheria, ague and scarlet fever, as well as childhood diseases such as whooping cough. Remedies were simple and well known, many patent medicines were employed, and whiskey was considered a standard tonic. The treatment of gunshot wounds, in those days, was accepted as a matter of course.

The history tells of several early medical societies, the first of which was the Wichita Pathological Society, organized in 1888 by Dr. Fabrique. In 1889 a second organization, the Wichita City Medical Society, came into being. Records are not available but is is assumed that the group functioned satisfactorily until 1902 when the Wichita Academy of Medicine was formed. It included most of the physicians in the city and had 29 charter members. The first meeting was held at the Wichita Club, and the first paper was given by Dr. J. D. Clark, who at that time was an interne at St. Francis Hospital.

The Academy of Medicine existed until 1903, when an organizer for the American Medical Association came to Kansas to reorganize the state society and county units. Several factions in Wichita, divided according to the hospitals in which they worked, resisted efforts to disband one group and form another but were finally influenced to do so by a young physician new in Wichita, Dr. J. F. Gsell. He convinced them that the responsibility of medicine and its obligation to the populace demanded unity among physicians, and the impression he made at that time caused the group to name

him as first president of the Sedgwick County Medical Society.

Twenty-five charter members were enrolled and paid dues of three dollars per year. One or two formal papers were presented at the weekly meetings, and after each session the members would adjourn to the back room for a smoker. At each meeting a motion was made to instruct the treasurer to pay for the keg of beer consumed at the previous gathering, and the motion always carried.

Dr. Clark's history is not confined to a recital of dates and events; it includes interesting and humorous anecdotes relating to the practice of medicine and quotations from publications of the time. He traces a definite course to present day standards in Sedgwick County where 233 physicians, having the best of modern scientific aids at their command, render medical care to the community.

Even casual reading of the publication discloses the wealth of interesting material that would be lost to posterity if it were not recorded, and brings to mind the fact that there exists no inclusive history of the Kansas Medical Society. The efforts of any of its members to compile a history of the state organization would be welcomed, and it is hoped that the work will be undertaken before the available material is lost in the passage of time.

Plans for 92nd Annual Meeting

Plans for the 92nd annual meeting of the Kansas Medical Society, to be held at Topeka, May 14-17, 1951, are nearing completion. Arrangements have been made for a superior scientific program and the usual entertainment features.

The scientific program is virtually completed and will include, among other well known medical specialists, such men as Ethan A. Brown, M.D., Boston, Allergy; Tullos O. Coston, M.D., Oklahoma City, Ophthalmology; Stuart C. Cullen, M.D., Iowa City, Anesthesiology; William J. Engel, M.D., Cleveland, Urology; Robert Jackson, M.D., Iowa City, Pediatrics.

The scientific program will begin Tuesday morning, May 15, and continue through Thursday, May 17, at the Little Theatre in the Municipal Auditorium.

In the auditorium will be housed the exhibits. Many commercial exhibitors are expected to present the latest products of America's best known pharmaceutical and surgical supply houses. A large field of scientific exhibits is anticipated for this session. Individual members of the Kansas Medical Society are cordially invited to exhibit any original work and may place their exhibits in competition for awards to be given at the annual banquet.

The annual banquet will be an outstanding occasion and promises to bring physicians of Kansas and their wives an unusual experience in entertainment. This will be held on Wednesday evening, May 16. Other entertainment will be the golf tournament and skeet shoot on Monday, May 14, and the Kansas Medical Athletic Association dinner that evening. On Tuesday evening and Thursday afternoon the House of Delegates will meet to conduct the business of the society.

Not completed but under study by the committee are plans for a public meeting to be held on Thursday afternoon. If current efforts to provide a program are successful, this session will have unusual interest for the profession and the laity alike. Complete details on this and all other events of the annual session will be carried in the April issue of the Journal. It is suggested, however, that reservations for hotel rooms be made at this time by writing directly to the hotels, of which the two largest are the Jayhawk and the Kansan.

The Shawnee County Medical Society is host to the Kansas Medical Society for this occasion. Dr. Don C. Wakeman, president of the host society, has appointed the following committee chairmen for the various details:

General Chairman—Harry J. Davis, M.D.
Scientific Program—David E. Gray, M.D.
EENT Scientific Program — Ralph R. Preston, M.D.
Commercial Exhibits—Paul M. Powell, M.D.
Scientific Exhibits—Louis Cohen, M.D.
Arrangements and Banquet—Francis T. Collins, M.D.
Publicity—Donald H. Macrae, M.D.
Entertainment—Frederick L. Ford, M.D.
Reception—Daniel L. Tappen, M.D.
Auxiliary—Robert E. Pfuetze, M.D.

Aid to Medical Education

Representative M. G. Burnside has made changes in his original plan for a bill to aid medical education, according to a recent report from Washington, and will make the proposal more far-reaching than he originally intended. Suggestions from consultants and advisors have brought about the change.

The original idea of the representative was for a simple measure going no further than authorizing financial assistance to existing medical schools to permit purchase of new equipment and renovation of buildings, plus pump-priming funds to encourage establishment of a few new schools. He is now considering addition of dental and osteopathy schools, provisions for an advisory council, and extension of the program over a five-year period rather than a three-year period.

BLUE SHIELD

Do the Members Really Understand the Benefits?

In our meetings with Blue Shield Relations Committees and with county medical societies, physicians frequently make the statement that the Blue Shield member does not understand what is in his contract. These statements carry the implication that the Blue Shield staff may be over-zealous in selling the contract to the public and thereby may mislead people to believe they have more services than Blue Shield actually covers.

This implication is so contrary to the spirit and aims of the Blue Shield organization that it should be discussed fully in the interest of a better understanding of what Blue Shield is trying to do. To put the subject in the proper perspective it should be realized that Blue Shield covers a membership of over a quarter million persons; that during the past year over 69,000 members were added to the plan. In other words we are dealing with the understanding of a large number of people. Furthermore, during the year 1950 Blue Shield processed some 56,248 cases. During that time letters from members indicated a misunderstanding by less than two per cent of those who wrote in. Even here, in a large number of cases they were not saying they did not understand the services but very often they did not agree with the policy.

Almost every widespread test that Blue Shield has conducted on these questions indicates that the vast majority of members received what they expected. It seems fair to say that if there were a wholesale misinterpretation or misunderstanding, there would be many more complaints than those indicated by the trend in the letters. So our problem resolves itself to a certain small percentage of members who either refuse to understand or have not had a clear knowledge of the contract benefits. There can be some discounting of the members who go to their doctors and simply ask questions on whether certain services are covered such as office calls, home care, diagnostic x-ray, etc. Many of these members are merely asking the questions to confirm their own understanding. It's a case of not wanting to miss anything in the event they are wrong.

Where Members Get Their Information

Potential members can get information on Blue Shield from five different sources. Where an enrollment is being conducted the potential member can read descriptive information about the plan in the folder which Blue Shield makes available for that purpose. This folder is carefully worded and virtually reproduces the contract language on the main essentials. There has been no complaint by physicians that the printed folders in any way misrepresent Blue Shield services.

A second method of members getting information is in meetings held by enrollment representatives. Here a most careful discussion is carried out by the representative with emphasis on the things that Blue Shield does and does not cover.

A third source of information is through the volunteer who helps to conduct community enrollment or through representatives of management where enrollment is being conducted in employee groups. Here the potential members are dependent upon the accuracy of information which is passed along by word of mouth. However, they also have access to the printed folder.

A fourth source of information is available to members when they join through the formal contract issued by Blue Shield. This contract has been written as simply as possible with those services not covered spelled out in bold type. The wording of the contract complies with the suggestions of the Department of Insurance. In fact every effort is made to be clear on all points.

The last source of "information" to which members or potential members are exposed in heresay. It would seem that this latter source might well be blamed for a considerable part of any misunderstanding that exists. When members talk over their operations they do not generally speak in technical terms which would comply with contractual provisions. They explain to their neighbors and friends what payment was made for certain services but might not clearly indicate the services they received. In this way other members gain impressions which in most cases are inaccurate. Later on when those particular members receive services, the exact contractual provisions do not fit with the information they have picked up through casual conversation and heresay.

The Blue Shield organization is sensitive to the need for careful presentation of the services to the public. Every effort is made to present the plan in its true light. There are enough good things about Blue Shield to make it unnecessary to exaggerate its ability to perform. However, it is most important that participating physicians do not give the impression that Blue Shield is careless in its presentation methods. A very valuable contribution by physicians and their medical assistants would be the carrying out of a constant educational job with members when they have occasion to deal with them on Blue Shield services. The attitude at the physician's office can do much to cement good member relations and keep our members satisfied and in the fold.

ACTIVITIES OF MEMBERS

Dr. J. W. Neptune, who has practiced in Salina since 1899, is spending the winter in California.

* * *

Dr. W. E. McKinley, who has been associated with the Osawatomie State Hospital for the past eight years, has opened an office for general practice in Gardner.

* * *

Dr. H. P. Jones, Lawrence, announces that Dr. G. E. Manahan is now associated with him in the practice of surgery. Dr. Manahan recently completed a three-year residency in general surgery at Ancker Hospital, St. Paul, Minnesota.

* * *

Dr. George Westfall, Jr., who has been on the staff of the Hertzler Clinic, Halstead, for the past 18 months, received orders to report for active duty in the Army at Brooks General Hospital, San Antonio, Texas, on January 6. He recently received a commission as a captain.

* * *

Dr. Thomas R. Hood, director of the city-county health department at Topeka, is one of 12 members of a newly organized city-county civil defense council.

* * *

Dr. Robert M. Knox, who has been practicing in Wamego for three years, went to Des Moines last month for a two-year residency in surgery at the Iowa Methodist Hospital.

* * *

Dr. J. E. Seitz, Wakeeney, reported at Fort Sam Houston, Texas, on January 6 for active duty with the Army. He learned there that he will be assigned to duty in Japan.

* * *

Dr. W. W. Weltmer, Beloit, was named health officer of Mitchell County recently.

* * *

Dr. John Coyle, Coffeyville, discussed socialized medicine before the Longfellow P.T.A. unit at Coffeyville January 16.

* * *

Dr. N. H. Overholser, El Dorado, was sworn in as coroner of Butler County on January 8.

* * *

Dr. Herbert L. Bunker, Jr., Junction City, was recently commissioned a captain in the Army reserve corps and reported for duty at Fort Riley on February 5.

* * *

Dr. C. H. Benage, Pittsburg, was speaker at dedication exercises for the new 50-bed Neosho Memorial Hospital at Chanute, January 15. The hospital was financed by a county bond issue and $100,000 in local contributions, without federal aid.

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Dr. A. L. Hilbig, who has been practicing in Liberal for 20 years, was the subject of a feature article in the Liberal Southwest Times on January 4. Dr. Hilbig is president of the Liberal Rotary Club this year.

* * *

Dr. Lyle Wonderlich, Concordia, was guest of honor at a party held in Concordia recently before he reported for duty at an Army air corps camp in Biloxi, Mississippi. Dr. Wonderlich has been serving as anesthesiologist at St. Joseph Hospital in Concordia.

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Dr. H. L. Clark, Topeka, completed his 26th year as Shawnee County coroner on January 8. A feature story on his experiences in that office was printed in the Topeka Capital in December.

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Dr. T. C. Ensey, Marion, took office as Marion County coroner on January 8.

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Dr. Robert W. Myers, staff member of the Bethel Clinic, Newton, was recently commissioned a captain in the Army and received orders to report to Fort Sam Houston, Texas, on January 6 for a 30-day orientation school.

* * *

Dr. Frank X. Lenski, Iola, has purchased St. John's Hospital there from the Sisters of St. Joseph who had been operating it, and announces that it will be open at least until the Allen County Hospital is prepared to receive patients.

* * *

Dr. Charles Hopper, Emporia, who had received Army orders to report to Fort Sam Houston, Texas, on January 4, received approval of his request for a 30-day delay.

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Dr. J. E. Hill, Arkansas City, has been appointed eye, ear, nose and throat physician for the Santa Fe Railway. Dr. G. L. Campbell, also of Arkansas City, has been named an additional Santa Fe surgeon for the area.

* * *

Dr. W. Stephenson, Norton, took the oath of office for county coroner in January, starting his 24th year as an elected county official.

* * *

The Gelvin-Haughey Clinic, Concordia, was formally opened on January 16. On the staff are Dr. E. Raymond Gelvin, Dr. Leo E. Haughey, and Dr. Fred Emery, surgeons; Dr. J. E. Scheffenmacher, radiologist; Dr. C. D. Kosar, consulting eye, ear

nose and throat specialist, and Dr. John Porter, consulting cardiologist. Dr. M. D. McComas, Jr., urologist, will join the staff on May 1.

* * *

Dr. T. P. Butcher, Emporia, was speaker at a meeting of the Men's Club of the First Congregational Church at Emporia at its January meeting. He told of recent advancements in medicine and surgery.

* * *

Dr. George von Leonrod, Jr., Dighton, is beginning a new term as health officer of Lane County.

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Dr. Robert E. Bolinger, assistant professor of medicine at the University of Kansas School of Medicine, spent the month of January at the Institute for Nuclear Studies at Oak Ridge, Tennessee.

* * *

Dr. C. D. Monroe, Ulysses, a Navy reserve officer, received orders to report for active duty on January 15 at the Great Lakes Naval Training Station.

* * *

Dr. Karl Voldeng, Wellington, was one of the speakers at an all-day meeting for workers for the American Cancer Society at Wellington on January 15. He discussed new trends in cancer research.

* * *

Dr. Richard R. Howard recently completed a fellowship in internal medicine at the Massachusetts General Hospital and has rejoined the Snyder-Jones Clinic staff in Winfield.

* * *

Dr. G. I. Thacher, Waterville, was recently named health officer for Marshall County.

* * *

Dr. David Robinson, chairman of the section on plastic surgery at the University of Kansas School of Medicine, spoke on "The Coverage Problem in Compound Fractures of the Lower Leg" before a meeting of the Western Surgical Association in Minneapolis in December.

* * *

Dr. S. D. E. Woods, superintendent at the Osawatomie State Hospital for the past 23 years, resigned that position recently because of poor health. Dr. Wirt A. Warren has been appointed acting clinical director.

* * *

Dr. Jack W. Revere has joined the staff of the Ashley Clinic at Chanute and will specialize in surgery. He recently completed a residency in surgery at the University of Kansas Medical Center.

* * *

Dr. W. H. Algie, Kansas City, was speaker at a recent meeting of the Wyandotte County Medical Assistants Society. He discussed emergency medical care.

Dr. V. J. Elson, Paola, was named coroner for Miami County last month.

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Dr. Arthur Bacon, Dr. Earl L. Mills and Dr. David Wall, all of Wichita, were speakers at a staff conference of psychiatric social workers held at Wichita last month.

* * *

Dr. M. O. Steffen, Great Bend, was guest speaker at a meeting of the Hearthstone Home Demonstration Unit in Great Bend last month. He presented arguments against a system of socialized medicine.

* * *

Dr. Charles S. Davis has discontinued practice in Galena and is entering the Army as a first lieutenant in the medical corps.

COUNTY SOCIETIES

A dinner meeting of the Marion County Society was held at Marion, January 11. For the scientific program Dr. A. C. Eitzen, Hillsboro, gave a case report on a patient with a second ectopic pregnancy, Dr. W. M. Tate, Peabody, reported a case of temporal arteritis treated with ACTH, and Dr. R. R. Melton, Marion, discussed glaucoma and presented a case report. The following officers were elected for 1951: president, Dr. G. J. Goodsheller; vice president, Dr. R. R. Melton; secretary-treasurer, Dr. O. C. McCandless.

* * *

The Central Kansas Medical Society was host to the Golden Belt Medical Society at an afternoon program and dinner session at the Ellsworth Country Club on January 4. Scientific papers were presented by members of the faculty of the University of Kansas School of Medicine. Dr. G. O'Neal Proud, chairman of the Department of Otolaryngology, discussed "The Tonsillectomy Problem," and Dr. A. Theodore Steegmann, professor of neurology, spoke on "Diagnosis and Treatment of Cerebrovascular Accidents."

* * *

"The Use of Antibiotics in Non-Tuberculous Pulmonary Diseases" was the topic of a paper presented at the January 9 meeting of the Sedgwick County Medical Society in Wichita. The speaker was Dr. John W. Middleton of the University of Texas School of Medicine.

* * *

Dr. J. R. Prichard, Fort Scott, was re-elected president of the Bourbon County Society at a meeting held at Burke Street Hospital, Fort Scott, December 20. Dr. Leland Randles, Fort Scott, was named secretary. A dinner for members of the society and the hospital staff was served by the Sisters of Mercy.

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Halpin, L. J.: An Appraisal of Therapeutic Procedures in Bronchial Asthma, J. Iowa M. Soc. 39:468 (Oct.) 1949.

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RESEARCH IN THE SERVICE OF MEDICINE SEARLE

The Franklin County Society met December 27 at Ransom Memorial Hospital, Ottawa. The following officers for 1951 were elected: president, Dr. R. A. Gollier; vice president, Dr. R. S. Roberts; secretary-treasurer, Dr. L. N. Speer; delegate, Dr. F. A. Trump; alternate, Dr. J. S. Barr.

* * *

New officers of the Wyandotte County Society were installed at a meeting held at the Hotel President, Kansas City, Missouri, January 13. Those serving are: president, Dr. M. J. Ryan; vice president, Dr. Glenn R. Peters; secretary, Dr. E. J. Grosdidier; treasurer, Dr. Emmerich Schulte.

* * *

Dr. A. W. Butcher, Wakefield, is now serving as president of the Clay County Society. Dr. G. W. Bale, Clay Center, is vice president and Dr. Forrest D. Taylor, Clay Center, is secretary-treasurer.

* * *

A meeting of the Wilson County Society was held January 10 at the Blue Tea Room in Neodesha, with members of the Auxiliary as guests for dinner. A business session was held later at the home of Dr. J. W. McGuire.

* * *

Three Iola physicians were named officers of the Allen County Society at a meeting held January 9. Dr. Eugene Meyers was elected president, Dr. A. R. Chambers, vice president, and Dr. Gerald B. Pees, secretary-treasurer.

* * *

The Riley County Society met January 17 at the Gillett Hotel in Manhattan. Dr. Paul W. Schafer, chairman of the department of surgery at the University of Kansas Medical Center, spoke on "Middle Lobe Syndrome," a report of a group of cases of middle lobe pulmonary disease under study at the university hospital.

* * *

A meeting of the Smith County Society was held at the home of Dr. Victor E. Watts, Smith Center, on January 16. Dr. Buford Hartman was elected president of the group for 1951 and Dr. Watts was named secretary. Dr. Hartman and Dr. Lafe Bauer will serve as delegates to the state organization.

Cancer Conference in Wichita

Almost 200 physicians from Kansas and a number from Missouri, Oklahoma, Texas and Colorado were present at the third annual Mid-West Cancer Conference held at the Broadview Hotel, Wichita, January 18, 19 and 20. The conference was sponsored by the Kansas Division of the American Cancer Society with the cooperation of the Kansas Medical Society.

The scientific program began on Thursday afternoon and continued through Friday and Saturday morning. Nine guest speakers took part in the formal program and were discussants at two round table luncheons. A pathology seminar, sponsored by the Wichita Association of Pathologists, was held Saturday afternoon. Dr. Howard T. Karsner of Washington, D. C., one of the speakers at the conference, was moderator for the seminar, discussing "Tumors of the Endocrine Glands."

Dr. John H. Lawrence, Berkeley, California, director and professor of the Donner Laboratory of Medical Physics at the University of California, was speaker at the banquet session, to which the wives of physicians were invited. He spoke on "Constructive and Destructive Aspects of Atomic Energy." Music was provided by the Wichita Kiwanis Club Quartet.

All of the scientific addresses were recorded and will be published as a supplement to the Journal some time next summer so that physicians who were unable to attend the conference will have the benefit of learning new techniques in the diagnosis and treatment of cancer.

Dr. J. P. Berger, Wichita, is chairman of the Committee on Control of Cancer and Dr. Orville R. Clark, Topeka, is president of the Kansas Division of the American Cancer Society.

Substitute for Morphine

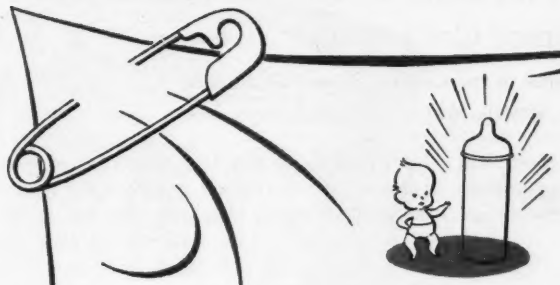
Perfection of a new synthetic narcotic to replace morphine was announced last month by Dr. Henry K. Beecher, civilian consultant to the Army Surgeon General and professor of research in anesthesia at the Medical School of Harvard University. The new drug, methadone, was tested in Korea on hundreds of American and allied wounded.

The story of methadone goes back to 1945 when the Army took over the I. G. Farben plant in Germany, where preliminary work had been done. Since that time a number of groups have worked on the synthetic which has the same effect as morphine, milligram for milligram, and which is made from nitriles derived from nitrogen and hydrocarbons. Its pain killing power is as great as that of morphine and it produces less nausea and vomiting.

DEATH NOTICES

John Ross Newman, M.D.

Dr. J. R. Newman, 70, an active member of the Bourbon County Medical Society, died at Fort Scott January 23. He had been in poor health for a year and had suffered a heart attack several days before his death. He was graduated from the Central Medical College, St. Joseph, Missouri, in 1905, and had practiced in Fort Scott since 1909.



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Case Reports from the University of Kansas Medical Center* Tumor Conference

Hemangioblastomas of the Cerebellum in Two Brothers

Edited by R. E. Stowell, M.D. and D. M. Gibson, M.D.

Two cases of hemangioblastoma of the cerebellum in brothers will be considered with respect to their relation to Lindau's and von Hippel's disease and the hematological complications.

Tumor Conference Case No. 51-1

G. R., a 15-year-old boy, was admitted to the University of Kansas Medical Center on November 14, 1950, and dismissed on December 10, 1950. He presented a history of progressive blurring of vision over a period of two months and experienced mild headaches during the week previous to admission, but had been accustomed to intermittent headaches for a protracted period.

The pertinent physical finding consisted of 10 diopters of papilledema. There were no localizing neurological signs or retinal hemangiomas. The blood contained 6.65 million red blood cells; hemoglobin 111 per cent; and total blood volume 3,600 cc. or 75 cc. per kilo, compared with an assumed normal of 78 cc. The total plasma volume was 1,400 cc. or 30 cc. per kilo, compared with an assumed normal of 43 cc. The total red cell mass was 2,160 cc. or 45 cc. per kilo, compared with an assumed normal of 35 cc. The hematocrit reading was 60 cc. On November 16 a suboccipital craniectomy was performed. A very vascular hemangioblastoma in the left cerebellar hemisphere was partially removed. Postoperatively the patient received appropriate radiation therapy.

Tumor Conference Case No. 51-2

L. R., the 22-year-old brother of the first patient, was admitted to the University of Kansas Medical Center on November 30, 1950, and dismissed on December 24, 1950. The patient was admitted with a history of occipital headaches and progressive blurring of vision, the onset of which corresponded with that experienced by his brother. During the two weeks preceding admission, the patient had experienced unsteadiness in his gait and tended to brush against people on the sidewalk.

The pertinent physical findings consisted of marked papilledema and absence of retinal hemangiomas. The patient was repeatedly examined neurologically and no focal signs were found until the night before surgery. At this time he presented nystagmus on right lateral gaze, tended to stagger to the right, and displayed slight cerebellar ataxia in the right arm on the finger to nose test. The red blood cell count was 5.56 million; hemoglobin 94 per cent; and total blood volume 4,409 cc. or 60 cc. per kilo. The total plasma volume was 1,984 cc. or 27 cc. per kilo and the total red cell mass 2,425 cc. or 33 cc. per kilo. The hematocrit was 55 cc. On December 2, 1950, a suboccipital craniectomy was performed. A very vascular hemangioblastoma in the right cerebellar hemisphere was removed. A total removal was accomplished in this instance and no postoperative irradiation therapy was instituted.

Discussion of Cases

Dr. Tice: The roentgenograms and ventriculograms in these two young men are similar. Two of the main features of increased intracranial pressure are illustrated by the spreading of the sutures in one boy and convolutional atrophy in the other. In both, the lateral and third ventricles are dilated and the third ventricle is cut off sharply and displaced forward, giving the picture of a posterior fossa, midline type of obstruction.

Dr. Helwig: Lindau's disease was first observed in 1926[1, 2] when Lindau, a Swedish pathologist, was examining some cerebellar cysts, which were thought at that time to be cystic gliomas. He found that a number of these cases were associated with angiomas of the retina, a condition known as von Hippel's disease.[3] He noted in the histories of many of these cases of von Hippel's disease that they had suffered from increased intracranial tension; and, adding two and two together, he found on studying the sections that the cerebellar lesions were also angiomatous growths. Therefore, the combination cerebellar and retinal angiomata has been known since that time as Lindau's syndrome, or Lindau's disease. Only about one-fifth of the cerebellar lesions were actually found to be associated with von Hippel's angiomatosis retinae. I have seen only one case of von Hippel's disease, in which the eye was removed, and that was a classical capillary hemangioma. It is my understanding that most of the reported cases have been true capillary angiomas.

Among the interesting features of these two cases is the apparent familial aspect of the condition occurring in two brothers having symptoms almost simultaneously. Moeller[4] called attention to the familial association in tracing two families for three generations, in which these lesions, both angiomatosis retinae and cerebellar hemangioblastomas occurred. It appears to be a non-sex-linked dominant Mendelian trait, which apparently arises from some

*Cancer teaching activities aided by a grant from the National Cancer Institute.

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disturbance in the mesenchymal tissues about the third fetal month.

Both of these tumors were red, hemorrhagic tumors, giving the classical gross appearance of many small blood-filled spaces. Usually these tumors occur as nubbins or masses within a cyst, frequently on the posterior aspect of the cyst, attached to one of the cerebellar hemispheres. Grossly they are often markedly vascular with an increased number of large vessels penetrating into them, and they even appear grossly to penetrate into the surrounding cerebellum, but they do not actually do so. They are usually delimited by a zone of compressed microglial substance. They tend to undergo extensive hemorrhage and degeneration, and the contents of the cyst may be lemon-yellow, orange-yellow, or occasionally they will seem to have a greenish-red color from recent hemorrhage. They are capillary hemangiomas, which are often associated with pseudo-xanthoma cells which occasionally appear to undergo proliferative activity. Neither one of these tumors shows a great amount of pseudo-xanthomatous elements. They are largely a tangled mass of endothelial-lined tubes, showing cystic changes and degeneration and areas of protein coagulum in the various sized cysts (Figure 1).

The tumors are perfectly benign as far as penetration and extension are concerned, and if they are adequately removed a good prognosis can be expected. One thing to remember is that if you do not remove this little nubbin, you are going to get a prompt recurrence of the cyst. Now that little nubbin may be hard to see. It may be evidenced by a little pink or brown or orange colored dimple actually in the wall of the cyst, so it could be possible to remove the cyst and leave the nubbin, and then you've simply got the same story over again.

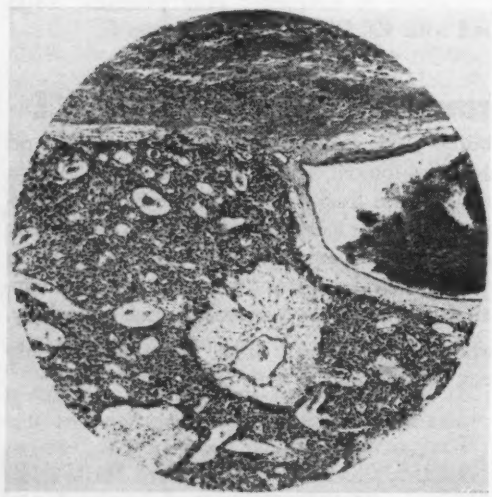

Figure 1. The tumor is composed of numerous blood spaces of varying size, surrounded by proliferating endothelial cells. Adjacent brain tissue is seen at the upper margin. X85.

Dr. Williamson: The younger boy showed up only because of failing vision, and went to the Ophthalmology Department; there they found severely choked discs. The neurological examination was completely negative. The suture separation in his skull is a striking finding at the age of 15; it is rare even to see complete separation after the age of 12. Ventriculograms showed the picture of a posterior fossa tumor; he had no lateralizing signs on either side, so we assumed it was a mid-line lesion.

On opening the dura, the cerebellar tonsils were herniated down to the second cervical lamina, indicating that he would have died, had we done a spinal puncture. This is an important point to emphasize. There was no tumor evident on the surface of his brain. We then introduced a needle into each hemisphere, and in the left cerebellar hemisphere at a depth of about four cm. we found a resistant mass. We put the needle in the lesion and aspirated, and got such a frightening amount of blood that we thought it might be an aneurysm. There was nothing to do but cut down on the lesion, and we saw that it was a neoplasm deep in the cerebellum. We attacked the tumor with forceps and sucker, but the extreme bleeding forced us to terminate the operation after about 30 minutes without complete removal of the tumor. We did get adequate tumor removal for decompression, enough to relieve the block of the aqueduct, so that postoperatively his papilledema immediately receded, his headaches disappeared, and he left the hospital in a satisfactory condition. Since he had gotten only a partial removal, we gave him x-ray therapy. We know statistically that after such a partial removal, with x-ray therapy, we can expect roughly three years, five years, or maybe eight years, before he will get a recurrence.

The other boy showed up in his doctor's office with the frank statement, "Say, Doc, I've got the same thing my brother has." We knew it was a hemangioblastoma; we knew that we were defeated by bleeding on the first case, so I talked it over thoroughly with the second boy and explained the risk of total removal to him. We decided that we would make every effort to get a total removal, because when the tumor is totally removed the patient is cured for life. We decided that the additional risk was worth it, so we operated upon this boy sitting upright, which reduces venous bleeding considerably from that experienced in the prone position. Before surgery we withdrew 900 cc. of his blood to lower his blood pressure. Beneath the dura we again found an advanced tonsillar herniation, and immediately saw the tumor on the surface of the brain in the right cerebellar hemisphere. I

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need not elaborate on the degree of bleeding which accompanied removal of the tumor. He was given 10 pints of blood during surgery. One contributing vessel was at least the size of my little finger. Total removal of the tumor was accomplished, though the degree of hemorrhage was almost disastrous. We finally had to pack the wound with oxycel and close, and fortunately he survived surprisingly well.

Cerebellar tumors are not uncommon, and such tumors in an adult are most likely hemangioblastomas or acoustic neurinomas. Three-fourths of these hemangioblastomas are cystic and have the little mural nodule that Dr. Helwig described. They can usually be totally removed and cured. Results with the solid tumors tend to be disastrous. Most surgeons agree that they are unable to remove the solid tumors satisfactorily, so they give x-ray in preference to losing the patients from hemorrhage. It is unfortunate that both of these boys had the solid type of hemangioblastoma and that both were tremendously vascular.

Another point that has come up recently is the relation of these tumors to polycythemia vera. At the last meeting of the Harvey Cushing Society there was a report of 40 cases of cerebellar hemangioblastoma from the Johns Hopkins Hospital,[5] which is not yet published. Of these 40 cases, 40 per cent had hemoglobin values ranging from 15 to 18 gm., and red cell counts over six million. In some of the cases a diagnosis of polycythemia vera had already been made before they presented symptoms of cerebellar tumors. Three-fourths of these lesions were cystic. All were benign microscopically. They may or may not be a part of Lindau's disease. It was agreed that the surgeon was obligated to get a total removal with the cystic lesions and do the best he could with the solid ones. They concluded that there was no erythropoiesis in the tumor. They also showed that total removal of the tumor did not alter the course of their polycythemia. They did not understand the relationship of polycythemia to cerebellar hemangioblastoma, but it was certainly very striking in 40 per cent of the patients. Another paper reported six cases of spinal hemangioblastomas in the same family.[6] There are several articles reporting cases of three cerebellar tumors in the same family, all hemangioblastomas.[7] In Lindau's disease, at autopsy, one finds many times cysts in the pancreas and kidneys, hypernephromas, angiomata of the spinal cord and liver, and an occasional tumor of the epididymis.

Dr. Stowell: Dr. Lemoine, would you comment on the ophthalmological aspects of von Hippel's and Lindau's disease?

Dr. Lemoine: On examination, these two boys presented a picture of increased intracranial pressure. I was interested in Dr. Williamson's statement about the large vein in the brain lesion, because one can find angiomatous lesions in the retina simply by looking for the enlarged vein. In the disc there is an extremely large retinal vein. It will be three to five times normal size; all one has to do is to follow that vein out to its end and there will be a little whirlpool arrangement of many small capillaries that constitutes the angioma. This angioma is a transient process, followed by gliosis of the retina and edema, and eventually the retina usually separates and exudative retinitis develops. These angiomata tend to be bilateral. In fact, the majority of cases that start out in one eye usually later involve the other eye, and blindness in patients that have angiomatosis retinae is the rule rather than the exception. The retinal and brain lesions may not occur concomitantly. I remember one 13-year-old patient on whom a retinal lesion was discovered during a routine examination; it was about 12 years later before he developed a cerebellar tumor.

The term von Hippel's disease is used for angiomatosis retinae. These boys did not present that picture, but only the picture of papilledema from increased intracranial pressure. They had no retinal lesions. Actually, the papilledema in the younger boy was so great that it extended from the disc up to and including the macular area so that part of the macular star could be seen on the edge of the elevated retina, and the other part was flat. It is amazing that postoperatively the papilledema decreased so much that he can now read.

These cases are usually picked up accidentally, or else they come in with cerebellar signs and one sees them in consultation. These people rarely have visual complaints because the angiomas start in the extreme periphery of the disc.

Dr. Stowell: Do you think either of these boys may develop retinal lesions in the future?

Dr. Lemoine: They could, but usually the eye lesions tend to occur earlier than the brain lesions. There are five other children in this family and it is extremely important to examine them all. We treat these lesions by deep x-ray therapy, and they disappear except for that dilated vessel.

Dr. Stowell: Dr. Wilson, would you comment on the hematologic problems these patients presented?

Dr. Wilson: We know that polycythemia can be associated with some brain tumors. For example, patients with Cushing's syndrome are prone to have polycythemia.[8] The normal total blood volume of adult man is 78 cc. per kilogram, with 43 cc. of plasma and a red cell mass of 35 cc. In polycythemia vera the total blood volume will be increased due to elevated red cell mass, the plasma volume remaining unchanged. These two boys have a little different picture. The younger boy has a total blood volume of 75 cc. per kilo, 30 cc. of which is plasma, and 45

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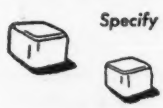
1. LEHR, D. (1950), RELATIVE MERITS OF COMMONLY USED SULFONAMIDE DRUGS AS COMPONENTS OF MIXTURES, N. Y. STATE J. MED., 50:1361, JUNE.



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cc. is red cells. This boy had an increase in red cells in the peripheral blood, suggesting a real polycythemia; but actually there is a decrease in blood plasma, so he has a false polycythemia. The older boy was a little different; he had a decreased total blood volume of 60 cc. per kilo, with 27 cc. of plasma and a red cell mass of 33 cc. So he has an actual decrease in the total blood volume and the amount of circulating plasma, but the red cell mass is normal. He actually has a pseudo-polycythemia, in that there is a hemo-concentration, with an elevated red cell count. This is an unusual hematologic finding. We plan to repeat the blood studies at a later date.

Dr. Williamson: We expect to follow these two boys, as well as other members of their family.

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SERVICE NOTES

All members of the Kansas Volunteer Advisory Committee, Lucien R. Pyle, M.D., Floyd C. Beelman, M.D., and Arthur J. Buff, D.D.S., were in Washington, D. C., January 12 and 13, to meet with the heads of the different branches of the armed forces and with representatives of Selective Service. The purpose of the meeting was to clarify the physicians' draft and to coordinate the efforts of the various advisory committees.

The latest registration of physicians was on January 15, when those in Priorities III and IV visited their local Selective Service boards. Physicians in Priorities I and II were registered in October. Under the law every licensed physician in the United States who is a citizen should now be registered except those who had reached their 50th birthdays on January 15 and those who hold commissions, either in the active or reserve branches of the armed forces. If for any reason a physician not exempt under the above provisions has not yet registered with his local Selective Service board, he should do so immediately.

Upon his return from Washington, Dr. Pyle sent a letter to each member of the Kansas Medical Society summarizing the knowledge gained at the meeting. A portion of that information is recorded below.

Priority I, on a national basis, will be exhausted before the call of men in Priority II, and so on through to Priority IV. Induction from each state will be on a proportionate ratio basis to available qualified men.

Between now and April 1, 1951, some reserve medical and dental officers may be called because of special qualifications. After that date those who do not belong to organized units cannot be called to active duty without the consent of the National Advisory Committee. Priority I registrants who have been commissioned and who have not been called to active duty by that date fall in this category.

Deferments will be granted to only a small percentage of those in Priorities I and II. Physicians in isolated communities may be deferred until replacements are available, and consideration will also be given to those essential for teaching purposes, mostly full-time instructors. Interns will not be deferred after the completion of an internship of 12 months.

Residents in their third year may be deferred for the completion of that year, but the deferment may be cut back if necessary. It is doubtful that residents will be deferred past the current year of their residencies, with possible exceptions in the critical categories of neurology, psychiatry, anesthesiology, physical medicine and rehabilitation, and public health. It is thought that resident programs in the next few years will be built around those men rejected for the armed forces for physical reasons, women and veterans.

It is recommended that physicians in Priorities I and II apply for reserve commissions. Anyone who applies after receiving induction orders will be required to serve as a private until his commission is received and his discharge as a private is processed, which may take several months. Such physicians will not receive the bonus of $100 per month offered those who are commissioned before receipt of induction orders. It is also suggested that residents classified II-A by their local draft boards apply for commissions a few weeks prior to the expiration of their deferments.

In his letter Dr. Pyle stressed the fact that it is impossible to make predictions for the future. Definite information will not be available until passage of a new defense bill now being considered by Congress.

Whatever we do to help the world, we have to start with health. There is not much that nations agree upon, but we can agree about health.—*Minnesota's Health, October 1950.*

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ANNOUNCEMENTS

The American Congress of Physical Medicine will hold its 29th annual scientific and clinical session, September 4-8, at the Shirley-Savoy Hotel, Denver, with instruction seminars on all except the last day. All sessions will be open to physicians. Information may be obtained from the Congress, 30 North Michigan Avenue, Chicago.

* * *

The National Gastroenterological Association announces that again in 1951 it will award $100 and a certificate of merit for the best unpublished contribution on gastroenterology or allied subjects. Competition is limited to members of the A.M.A. or of a similar organization in a foreign country. Entries, limited to 5,000 words, should be submitted in five copies to the Association, 1819 Broadway, New York.

* * *

The International Academy of Proctology will present its first teaching seminar on proctologic subjects in New York City, April 7. Registration is limited to physicians who are members of the A.M.A. or state or county societies, and preference will be given those affiliated with the Academy. Information may be secured from Dr. William Lieberman, Chairman, Seminar Committee, International Academy of Proctology, 1819 Broadway, New York.

* * *

At a special meeting of the American Board of Obstetrics and Gynecology, held in Pittsburgh, December 14, 1950, the following changes in regulations were adopted:

1. Physicians otherwise qualified, who were graduated before January 1, 1939, and whose required training was in obstetrics or gynecology alone, and who have confined their practice to the specialty for at least five years immediately prior to application may be accepted for examination as candidates for certification.

2. Applicants who have been certified by one of the other specialty boards will not be eligible for certification by this board until they have relinquished the certificate previously conferred.

3. Since the majority of cases in this specialty are non-operative, adequate training is required in basic sciences, infertility, endocrinology, oncology, irradiation therapy, psychosomatic medicine, electrotherapy, and other non-operative methods of diagnosis and treatment as well as training in major procedures.

* * *

The Atomic Energy Commission will offer four fellowships in industrial medicine for the 1951-1952 academic year. The stipend for the first year's training will be $3,600, plus tuition and laboratory fees, and for the second year $5,000. The fellowships are open to citizens of the United States who hold a degree from an approved medical school and who have had at least one year of internship. Applications should be submitted to A.E.C. Fellowships in Industrial Medicine, Atomic Energy Project, School of Medicine and Dentistry, University of Rochester, Rochester, New York.

* * *

A new certifying board, the American Board of Clinical Chemistry, Inc., has been established by representatives of the American Chemical Society, Inc., American Institute of Chemists, Inc., and the American Society of Biological Chemists, Inc. It is the purpose of the board to encourage the study, improve the practice, elevate and establish standards and advance the science of that specialized branch of chemistry known as clinical chemistry.

Candidates must present evidence of satisfactory moral and ethical standing and must have a Ph.D., M.D., M.Sc. or equivalent degree. Accredited courses in analytical, organic, physical and biological chemistry are required, in addition to three years full time experience in an acceptable clinical laboratory or five years as assistant professor or above in biological chemistry or related fields. Candidates who have practiced clinical chemistry for 10 years in an acceptable laboratory may be certified without examination at the discretion of the board. Those who file applications prior to July 1, 1952, whose qualifications are satisfactory to the board, may also be certified without examination.

Information may be secured from Dr. Joseph W. E. Harrisson, 1921 Walnut Street, Philadelphia.

* * *

The 1951 annual assembly of the American Academy of General Practice will be held in San Francisco, March 19-22. The program is being built around a broad basic concept of the general practitioner's responsibilities as a family physician. The entire first afternoon will consist of a study of the family and the problems of family living, and another afternoon will be devoted to discussion of pyschosomatic disorders as seen by a family physician. Twenty-six well known physicians will take part in the scientific program, among them Dr. William C. Menninger, Topeka.

Requests for hotel reservations are to be addressed to A.A.G.P. Housing Bureau, Room 200, 61 Grove Street, San Francisco.

* * *

The fourth annual postgraduate course in diseases of the chest sponsored by the American College of Chest Physicians and the Laennec Society of Philadelphia will be presented at the Hotel Warwick,

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Philadelphia, March 26-30. Applications will be accepted in the order in which they are received, and the tuition fee is $50. Applications should be sent to the College, 500 North Dearborn Street, Chicago.

Licenses to 37 Physicians

Licenses to practice medicine in Kansas were issued recently by the Kansas State Board of Medical Registration and Examination, eight by examination and 29 by reciprocity.

Those licensed by examination are: Dr. Michael J. Cox, Dodge City; Dr. Walter Maximalian Furst, Norton; Dr. Elroy Francis Goebel, Jr., Omaha; Dr. Bernard Halper, Wichita; Dr. Stephen John Kelly, St. Louis; Dr. Angelo Lapi, Kansas City, Missouri; Dr. John Albert Sheahon, Omaha; Dr. John Raymond Whitcher, Omaha.

Of the 29 licensed by reciprocity only five have plans to practice outside Kansas. Dr. K. Ruth Merrell Lapi and Dr. Joseph Albert Nigro listed their intended locations as Kansas City, Missouri, Dr. William Charles Mixson and Dr. Frederick Frick Young had made no decision on locations, and Dr. William Donald Ketter announced plans to practice in Falls City, Nebraska.

Those intending to practice in Kansas are: Dr. Robert Lamar Anderson, Wichita; Dr. Paul Glenn Brenneman, Hesston; Dr. William Cary Fleming, Topeka; Dr. John Keith Fulton, Wichita; Dr. Sigmund Gundle, Lawrence; Dr. Bert William Harned, Lenexa; Dr. Frank Henry Harris, Wichita; Dr. Stanley Gelbach Humphrey, Ottawa; Dr. Paul Marie Kersten, Topeka; Dr. George Hugh Lawrence, Winfield; Dr. Francis Xavier Lenski, Jr., Iola; Dr. Avard Chipman Long, Norton; Dr. Walter Emil Luedtke, Emporia; Dr. David Lukens, Hutchinson; Dr. Richard Lawrence Merkel, Topeka; Dr. Peter Edward Penico, Wichita; Dr. Donald Robert Pierce, Topeka; Dr. Ann Pollak, Kansas City; Dr. Winston Calaway Riggins, Topeka; Dr. Alex Scott, Belleville; Dr. Christine Thelen, Anthony; Dr. Charles LeRoy Williams, Wichita; Dr. John Harrison Wolaver, Topeka; Dr. William Henry Wood, Topeka.

BOOK REVIEWS

Recent Advances in Nutrition with Particular Reference to Protein Metabolism. By Paul R. Cannon. Published by University of Kansas Press, Lawrence, Kansas. 74 pages, 23 graphs.

In the three Porter Lectures given at the University of Kansas, Dr. Cannon summarizes the last decade's findings concerning protein metabolism with special reference to his experiments on the protein-depleted rat.

The following ideas illustrate the nature of the information presented:

A poor protein may be converted into a high quality one by the addition of essential amino acids lacking or deficient in amounts in the poor protein.

When flour containing lysine has been heated to a toasting temperature, the high temperature makes the lysine unavailable for intestinal digestion.

When protein-depleted rats are fed a diet adequate in all dietary essentials but with the dietary nitrogen derived from a mixture of crystalline amino acids, the removal singly of any one of the nine indispensable amino acids leads quickly to a slowdown or stoppage of plasma protein fabrication.

Protein utilization requires an adequate caloric intake. The lack of either calories or protein may constitute a limiting factor which hampers convalescence.

A deficiency of riboflavin may hinder the construction of certain tissue proteins.

A minimal daily requirement for each indispensable amino acid has been established. If any one of these amino acids is fed in an amount less than this daily requirement the animal loses appetite and weight. These indispensable amino acids are absolutely essential for maintenance of appetite and for rebuilding of depleted tissues, and they are essential every day in definite amounts and proportions.

Evidence shows that for effective tissue synthesis all of the essential amino acids must be available at approximately the same time. Experiments indicate that amino acids are necessary in certain proportions and that tissue synthesis is limited by the least amount available of any one amino acid.

Man's daily requirement of the eight essential amino acids for maintenance has been established by W. C. Rose and his associates. This contribution will serve as a basis for determinations of the altered requirements in abnormal states. For maintenance the daily protein needs range between 20 and 30 grams of good quality protein. For protein synthesis in a severely depleted patient, probably 125 grams of high quality protein are needed daily.

Protein concentrates are usually effective. Oral hydrolysates are actually indicated for only a few situations, namely allergy or where minimal amounts of residue are required. Skim milk powder is available at a fraction of a cent per gram of protein, whereas a hydrolysate costs 10 to 20 times that much.

One criticism of the book is that the title on the outside cover, "Recent Advances in Nutrition," is misleading. Over three-fourths of the book deals with protein metabolism. Other nutrients are mentioned only as they are concerned with proteins.—*B.R.*

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Karl J. Waggener, M.D. Wendell T. Wingett, M.D.

Diagnostic Standards and Classification of Tuberculosis, 1950 Edition. Published by National Tuberculosis Association.

This enlarged publication is not intended as a text, but rather a statement of principles to serve as a general guide to practitioners, sanatoria, public health and industrial agencies.

A new clinical classification of tuberculosis is presented, placing greater emphasis on adequate bacteriological study. Also, the accepted classification of bronchopulmonary segments is presented. Separate sections on mass roentgenologic surveys and vocational rehabilitation appear for the first time. The section on technical procedures has been enlarged to give more detailed information.

This new addition will probably not meet universal approval of clinicians, but will certainly be accepted by public agencies as a guide in establishing policies of isolation, re-employment and various medico-legal questions. Its contents should be familiar to all practitioners.

This publication is available through your local tuberculosis society or the Kansas Tuberculosis and Health Association, 1134 Topeka Avenue, Topeka, Kansas.—*L.E.W.*

* * *

The Science of Health. Second Edition. By Florence L. Meredith. Published by the Blakiston Company, Philadelphia. 452 pages, 48 tables, 134 illustrations. Price $3.75.

This book is designed for college students in hygiene courses. It is presented largely from the individual standpoint, as the author gives facts which are usable by the individual student in making his own decisions regarding personal hygiene. Dr. Meredith has attempted to give opinions held by medical science and has used scientific terminology in so far as it will help to clarify the student's thinking. She has made an effort to weight the material properly, giving each subject an amount of space in proportion to its importance.

The material is arranged so that its order and sequence in itself will be educational in effect. Thus, in Part 1, which is an introduction, the national health situation is first presented followed by a description of the body itself. Part 2 covers the daily maintenance of individual health under the following headings:

1. Keeping the Circulation Good; 2. Taking In Supplies; 3. Doing Work; 4. Renewal of Energy; 5. Regulating Body Temperatures; 6. Keeping Clean; 7. Avoiding Injury By Germs; 8. Avoiding Injury By Physical Agents; 9. Avoiding Injury By Chemical Agents.

Part 3 presents major health problems in the United States, both of communicable diseases and noncommunicable diseases. The important subject of mental health is covered in Part 4, and, finally, Part 5 is entitled "The Next Generation" and covers reproduction, heredity and parental care. There is an excellent bibliography which includes books chosen for their interest to the general public.

The book is well written and can be recommended as an aid to teachers to present hygiene briefly, yet in a manner befitting a scientific subject in a college curriculum.—*E.V.T.*

ABSTRACTS FROM CURRENT LITERATURE

Vitamin B_{12} in Pernicious Anemia

Vitamin B_{12} Concentrate in the Maintenance of Pernicious Anemia. By G. C. Meacham, Paul J. Vignos, Robert W. Heinle, Austin S. Weisberger and Martin Epstein, Jnl. Lab. and Clin. Med., 35:5, 713-720, May 1950.

Most studies on vitamin B_{12} to date represent short-term observations on pernicious anemia patients in relapse, both hematologic and neurologic. It produces a hematopoietic response comparable in every way to that obtained with liver, and is effective in controlling neurologic and lingual complications of pernicious anemia. These studies indicate that 0.75 to 1.0 microgram of vitamin B_{12} is about equivalent to one U.S.P. unit of liver extract. More recently it has been suggested that larger amounts of vitamin B_{12} are necessary to produce maximum effect.

The series reported by these authors consists of 30 patients treated for five to 14 months, 20 of whom were treated for 12 or more months. Twenty-three of the 30 patients had been previously treated for one year or more with crude liver extract in dosage of 10 units every four weeks, and 21 of them maintained satisfactory hemoglobin and erythrocyte levels without neurologic complications. Fifteen of these patients had likewise been treated with folic acid for a year or more, with good control. The most effective dosage of folic acid was 10 mg. daily.

The series of patients treated with vitamin B_{12} received the equivalent of one microgram daily, given as a single injection at intervals of three to four weeks. Of the 23 patients previously maintained on crude liver, 20 showed a decrease in the erythrocyte count on vitamin B_{12}, and 14 of these showed a marked decrease. When therapy with vitamin B_{12} was compared with previous folic acid therapy, 17 out of 18 patients had a decrease in erythrocytes. However, all patients on B_{12} therapy maintained a sense of well-being, and none developed signs or symptoms of neurologic relapse. Several patients who were allergic to liver extract had no difficulty with vitamin B_{12}.

AMERICAN BOARD EXAMINATIONS

Anesthesiology. Written, various locations, July 20. Oral, Coronado, Calif., April 4-7; Memphis, October 14-17. Secretary, Dr. Curtiss B. Hickcox, 80 Seymour Street, Hartford 15, Conn.

Dermatology and Syphilology. Oral, New York, April 6-8. Secretary, Dr. George M. Lewis, 66 East 66th Street, New York 21, N.Y.

Internal Medicine. Executive Secretary-Treasurer, Dr. William A. Werrell, 1 West Main Street, Madison 3, Wis.

Obstetrics and Gynecology. Written examination and review of case histories, various locations, February 2. Secretary, Dr. Paul Titus, 1015 Highland Building, Pittsburgh 6, Pa.

Ophthalmology. Oral, San Francisco, March 11-15; New York, May 31-June 4; Chicago, October, 1951. Secretary, Dr. Edwin B. Dunphy, 56 Ivie Road, Cape Cottage, Maine.

Orthopedic Surgery. Secretary, Dr. Harold A. Sofield, 1865 North Kingsley Avenue, Los Angeles 27, Calif.

Otolaryngology. Secretary, Dr. Dean M. Lierle, University Hospital, Iowa City, Iowa.

Pathology. Written and oral, Cleveland, April 23-24. Secretary, Dr. Robert A. Moore, 1402 South Grand, St. Louis, Mo.

Pediatrics. Oral, New Orleans, March 2-4. Secretary, Dr. John McK. Mitchell, 6 Cushman Road, Rosemont, Pa.

Plastic Surgery. Secretary, Dr. Bradford Cannon, 330 Dartmouth Street, Boston 16, Mass.

Proctology. Dallas, Minneapolis, Philadelphia and San Francisco, May 12. Secretary, Dr. Louis A. Buie, 102-110 Second Avenue, S. W., Rochester, Minnesota.

Psychiatry and Neurology. Secretary, Dr. Francis J. Braceland, 102-110 Second Avenue, S. W., Rochester, Minn.

Radiology. Secretary, Dr. B. R. Kirklin, Mayo Clinic, Rochester, Minn.

Surgery. Written, various centers, March, 1951. Secretary, Dr. J. Stewart Rodman, 225 South 15th Street, Philadelphia, Pa.

Urology. Chicago, February 10-14. Secretary, Dr. Harry Culver, 314 Corn Exchange Building, Minneapolis 15, Minn.

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Surgery of Colon & Rectum, One Week, starting March 5, April 9.
Basic Principles in General Surgery, Two Weeks, starting April 2.
Gallbladder Surgery, Ten Hours, starting April 23.
Fractures & Traumatic Surgery, Two Weeks, starting March 19.
GYNECOLOGY—Intensive Course, Two Weeks, starting February 19, March 19
Vaginal Approach to Pelvic Surgery, One Week, starting March 5, April 2.
OBSTETRICS—Intensive Course, Two Weeks, starting March 5, April 2.
MEDICINE — Intensive General Course, Two Weeks, starting April 23.
Gastro-enterology, Two Weeks, starting May 14.
Gastroscopy, Two Weeks, starting March 5.
Electrocardiography & Heart Disease, Two Weeks, starting March 19.
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The authors speculate as to the cause for failure to maintain high erythrocyte levels with vitamin B_{12}. Various theories are suggested, but they conclude that a dosage averaging one microgram per day is simply not sufficient for long-continued treatment.—*E.J.R.*

* * *

Poliomyelitis in Infants

Report of Ten Cases of Poliomyelitis in Infants Under Six Months of Age. By Charles M. Mouton et al, Jnl. Ped., 36:4, 482-492, April 1950.

Only 17 cases of poliomyelitis in infants under six months of age have been reported in the literature since 1897. In 1948 in the county of Los Angeles 2,973 cases of poliomyelitis were seen in the Communicable Disease Unit of the Los Angeles County Hospital and only 10 of these patients were under the age of six months.

The youngest was 14 days and the oldest five and one-half months. Only one had bulbar signs. The mortality rate for the group was 10 per cent. The one death was a five and one-half month old girl with a three-day history of fever, irritability, anorexia, weakness, and paralysis of the lower extremities. She died on her 26th hospital day, of bronchopneumonia.

In reviewing the presenting signs and symptoms in the 10 cases, two had upper respiratory infection, two manifest irritability, five had fever over 101, five were anorexic, and in eight of the infants weakness or paralysis had been noted prior to admission. Two of the 10 infants had weakness and paralysis as the only findings. None had meningeal signs, gastrointestinal symptoms or convulsions. The highest white blood count was 26,000 and the lowest 5,250, the average being 11,000. The neutrophile count varied between 36 per cent and 72 per cent. Spinal cell counts presented a low of eight lymphocytes and a high of 330, all lymphocytes. Two had 100 cells or more.

Treatment was supportive; all received hot packs and prophylactic penicillin.

Neurological examination of the 10 patients revealed that seven had absence of deep reflexes, one had right peripheral facial paralysis, one had absent gag reflex, and one was unable to swallow. Six had intercostal weakness and two diaphragmatic weakness, yet only one of these patients required the use of the respirator. When discharged from the hospital, residual involvement was as follows: five patients had paralysis of one extremity or more (right leg in two, right arm in one, left arm in two, both arms in one, both legs in two). One patient had generalized muscle tenderness as the only involvement, one patient had scoliosis. Eight of them had some paresis, either with or without paralysis.—*D.R.D.*

Actinomycosis

Actinomycosis of the Pharynx and Base of Tongue. By William W. Wilkerson, Jr., and Lee F. Cayce.

The patient, aged 17, complained of a constant hacking cough, irritation and fullness of the throat in the region of the base of the tongue, which had been annoying her for two weeks. The symptoms were aggravated when the patient was reclining. Upon examination yellow excrescences were noted protruding from many crypts in the base of the tongue and inferiorly behind the epiglottis. Superiorly a few were found on the right lateral pharyngeal band. There was no inflammatory reaction.

The excrescences were rounded in shape, approximately two mm. in diameter and protruding from the crypts from one to three mm. The largest one lay anteriorly to the epiglottis.

These yellowish excrescences clung tenaciously to the crypts, yet no bleeding occurred upon removal. Cultures revealed actinomycosis (buccalis). The ear, nose and throat and general examinations, including serology, were negative other than some remnants of adenoid tissue.

The excrescences were composed of connective tissue in the center, surrounded by hyperkeratotic epithelium. Colonies of actinomycosis were found throughout these masses. The treatment consisted of the daily removal of the excrescences, the painting of the entire area with bismuth violet, roentgen radiation of lymphoid tissue in the area, autogenous vaccine, massive doses of potassium iodide, penicillin aerosol, and 4,200,000 units of penicillin given over a period of four months. With this therapeutic regime, definite improvement was apparent, yet the formation of the irritating masses continued. The infection, however, showed no tendency to spread.

At this point the patient was given 1.5 gm. of chloromycetin daily. Within a week a marked diminution of both the number and size of the yellowish masses was noted. At the end of three weeks the throat appeared healed. The patient was then given 0.75 gm. of chloromycetin a day for a month as a precautionary measure. The other therapy was continued throughout the entire period of treatment, but less frequently after chloromycetin therapy was instituted.

At the end of five months the patient was entirely well and her throat cultures were negative. Her general condition was never involved.—*E.L.G.*

Student American Medical Association

A Student American Medical Association came into being recently when student delegates from 48 medical schools throughout the country met in Chicago. Objectives of the organization will be the

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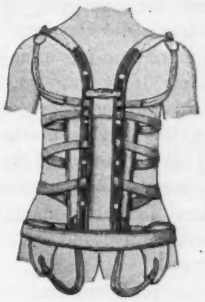

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advancement of medicine, contribution to the welfare and education of medical students, familiarization of its members with the purposes and ideals of the medical profession, and preparation of its members to meet the social, moral and ethical obligations of the profession.

The association will be made up of academic societies in medical schools of the United States which are approved by the Council on Medical Education and Hospitals of the A.M.A. Each society, not more than one at any school, must have a membership of at least one-fourth of the students, or 85 students, whichever is the smaller.

An advisory committee to each constituent society will be composed of the dean of the school or his appointed representative, two faculty members elected by the students, a county medical society representative and a state medical society representative.

The president and vice president will represent the group at meetings of the A.M.A. House of Delegates. A change in the constitution of the A.M.A. to provide such representation is expected to become effective at the annual meeting in Atlantic City in June.

A virtue and a muscle are alike. If neither of them is exercised they get weak and flabby.—Richard L. Rooney.

General Practitioners Plan Meeting

The annual meeting of the Kansas Academy of General Practice will be held at Wichita, April 1st. There will be a business meeting, scientific session and banquet during the day. Dr. George L. Thorpe, Wichita, is chairman of the committee arranging the program. Plans for the session were made at a meeting of the Board of Directors held at Kansas City on January 7.

Remember that life's length is not measured by its hours and days, but by that which we have done for our country and kind. A useless life is short if it lasts a century. We may do much in a few years, and we may do nothing in a lifetime.—*Albert Pike.*

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HOMER F. MARSH, Ph.D., Professor of Bacteriology, University of Oklahoma School of Medicine, Oklahoma City.
WAYLAND A. STEPHENSON, M.D., Chief of Neurology, Veterans Administration Hospital, Hine, Ill.
BEN J. WILSON, M.D., Fellow in Experimental Surgery, Southwestern Medical School of the University of Texas, Dallas.
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HENRY TIHEN, M.D., Lecturer in Medicine

SUBJECTS TO BE DISCUSSED

SOME ASPECTS OF THE CHOLESTEROL PROBLEM.
THE PRESENT-DAY MEDICAL TREATMENT OF PEPTIC ULCER.
CLINICAL CONSIDERATION OF THE PECULIARITIES OF FUNGUS INFECTIONS.
A CONSIDERATION OF SUPERFICIAL MYCOSES.
SOME SYSTEMIC MYCOSES SEEN IN THE SOUTHWEST.
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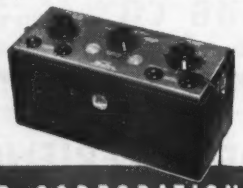

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